

SANSKRIT PHONETICS

DR. C. C. UHLENBECK

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A MANUAL
OF
SANSKRIT PHONETICS.



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A MANUAL
OF
SANSKRIT PHONETICS.

IN COMPARISON WITH THE INDOGERMANIC
MOTHER-LANGUAGE, FOR STUDENTS OF GERMANIC
AND CLASSICAL PHILOLOGY,

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PREFACE.

The idea of publishing an English edition of my *Handboek der Indische Klankleer* (Leiden, Blankenberg & Co. 1894) was suggested to me by others; but for that suggestion this translation certainly would not have been undertaken. In general I have followed the Dutch text: alterations have been made only, when there were positive inaccuracies in the Dutch edition or when an alteration had become necessary because of the progress of comparative philology since 1894. I have also considerably augmented the references to the scientific literature and somewhat enlarged the part on the accent. Some emendations are due to the recensions of Kern, Speyer, Zubatý [and Johansson], of whose observations and remarks I have made a grateful use.

I further need only repeat, what I said in the preface to the Dutch original: the purpose of my having composed this little handbook is to introduce the student into the comparative-phonetic study of Sanskrit. Though as a rule students of Classical and Germanic philology do not read Vedic texts, I have not hesitated to cite words and forms, which had already become obsolete in the epic and classical language, mentioning, of course, the fact, that such a word only oc-

curs in Vedic. In general I have avoided to cite Iranic, Lithuanian and Slavonic: I know, it is true, that this lessens the scientific worth of my book, but I do not think it desirable to trouble the student with several languages, which are either quite unknown to him or which he only just begins to learn.

May this edition be of some use to the students in England, America and India.

Amsterdam, Nov. 1897.

C. C. UHLENBECK.

CONTENTS.

| | Page |
|------------------|------|
| Preface. | v. |

INTRODUCTION.

| | |
|--|----|
| § 1. The Indogermanic family of languages. | 1. |
| § 2. The Aryan group. | 2. |
| § 3. The Indian dialects | 3. |
| § 4. Sounds and letters | 5. |

PART I. SYSTEM OF VOWELS.

A. THE REPRESENTATION OF THE INDOGERMANIC VOWELS IN SANSKRIT.

| | |
|---|-----|
| § 5. The Indogermanic vowels in general | 9. |
| § 6. The Indogermanic vowel-gradation | 10. |
| § 7. Idg. <i>a</i> | 14. |
| § 8. Idg. <i>ā</i> | 16. |
| § 9. Idg. <i>e</i> | 17. |
| § 10. Idg. <i>ē</i> | 18. |
| § 11. Idg. <i>o</i> | 19. |
| § 12. Idg. <i>ō</i> | 21. |
| § 13. Idg. <i>ə</i> | 22. |
| § 14. Idg. <i>i</i> | 26. |
| § 15. Idg. <i>î</i> | 27. |
| § 16. Idg. <i>u</i> | 27. |

| | |
|--|-----|
| § 17. Idg. \bar{u} . | 28. |
| § 18. Idg. \bar{m} | 28. |
| § 19. Idg. \bar{n} . | 29. |
| § 20. The problem of the long sonant nasals. | 30. |
| § 21. Idg. \bar{r} , \bar{l} . | 31. |

B. THE RELATION OF THE INDIAN VOWELS TO THE INDOGERMANIC.

| | |
|--|-----|
| § 22. The Indian vowels in general. | 32. |
| § 23. Skr. a | 37. |
| § 24. Skr. \bar{a} . | 38. |
| § 25. Skr. i . | 38. |
| § 26. Skr. \bar{i} . | 39. |
| § 27. Skr. u | 39. |
| § 28. Skr. \bar{u} | 40. |
| § 29. Skr. e . | 40. |
| § 30. Skr. o . | 41. |
| § 31. Skr. \bar{r} , \bar{l} , \bar{l} . | 41. |
| § 32. Skr. $\bar{a}i$ | 42. |
| § 33. Skr. $\bar{a}u$ | 42. |

PART. II. SYSTEM OF CONSONANTS.

A. THE REPRESENTATION OF THE INDOGERMANIC CONSONANTS IN SANSKRIT.

| | |
|--|-----|
| § 34. The Indogermanic consonants in general | 43. |
|--|-----|

Semivowels.

| | |
|------------------------|-----|
| § 35. Idg. \bar{i} . | 45. |
| § 36. Idg. \bar{u} | 46. |

Nasals.

| | |
|------------------|-----|
| § 37. Idg. m . | 47. |
|------------------|-----|

CONTENTS.

IX

Page

| | |
|-----------------------|-----|
| § 38. Idg. <i>n</i> . | 48. |
| § 39. Idg. <i>ñ</i> | 50. |
| § 40. Idg. <i>ñ̄</i> | 50. |

Liquids.

| | |
|--|-----|
| § 41. The liquids in general | 50. |
| § 42. Idg. <i>r</i> . | 51. |
| § 43. Idg. <i>l</i> . | 52. |
| § 44. Combinations of <i>r</i> and <i>l</i> with dentals | 53. |
| § 45. Metathesis of <i>r</i> | 56. |

Labial explosives.

| | |
|-----------------------|-----|
| § 46. Idg. <i>p</i> . | 56. |
| § 47. Idg. <i>b</i> . | 57. |
| § 48. Idg. <i>bh</i> | 58. |

Dental explosives.

| | |
|-----------------------|-----|
| § 49. Idg. <i>t</i> . | 59. |
| § 50. Idg. <i>d</i> | 61. |
| § 51. Idg. <i>dh</i> | 62. |

Guttural explosives.

| | |
|------------------------------------|-----|
| § 52. General remarks | 63. |
| § 53. The palatalization-rule | 63. |
| § 54. Idg. <i>q</i> , <i>k</i> | 66. |
| § 55. Idg. <i>qh</i> , <i>kh</i> . | 67. |
| § 56. Idg. <i>g</i> , <i>g</i> | 68. |
| § 57. Idg. <i>gh</i> , <i>gh</i> . | 68. |

Palatal explosives.

| | |
|-----------------------|-----|
| § 58. General remarks | 69. |
| § 59. Idg. <i>ḱ</i> . | 70. |

| | Page |
|--------------------------------|------|
| § 60. Idg. <i>ĝ</i> | 71. |
| § 61. Idg. <i>ĝh</i> | 72. |

Spirants.

| | |
|--|-----|
| § 62. Idg. <i>s</i> | 73. |
| § 63. Idg. <i>z</i> | 76. |
| § 64. Idg. <i>j</i> | 77. |
| § 65. Idg. <i>v</i> | 78. |
| § 66. Idg. <i>ɣ</i> | 78. |
| § 67. Idg. <i>p</i> , <i>ɸ</i> | 79. |

B. THE RELATION OF THE INDIAN CONSONANTS TO
THE INDOGERMANIC.

Semivowels.

| | |
|-------------------------------|-----|
| § 68. Skr. <i>y</i> | 80. |
| § 69. Skr. <i>v</i> | 81. |

Nasals.

| | |
|--|-----|
| § 70. Skr. <i>m</i> | 81. |
| § 71. Skr. <i>n</i> | 81. |
| § 72. Skr. <i>ṇ</i> | 82. |
| § 73. Skr. <i>ṇi</i> | 83. |
| § 74. Skr. <i>ṇ̄</i> | 83. |
| § 75. Nasalization of vowels | 83. |

Liquids.

| | |
|-------------------------------|-----|
| § 76. Skr. <i>r</i> | 83 |
| § 77. Skr. <i>l</i> | 84. |

Labial explosives.

| | |
|--------------------------------|-----|
| § 78. Skr. <i>p</i> | 84. |
| § 79. Skr. <i>ph</i> | 85. |

CONTENTS.

XI

Page

| | | |
|-----------------------|-----------|-----|
| § 80. Skr. <i>b</i> . | | 85. |
| § 81. Skr. <i>bh</i> | | 85. |

Dental explosives.

| | | |
|-----------------------|-----------|-----|
| § 82. Skr. <i>t</i> . | | 86. |
| § 83. Skr. <i>th</i> | | 86. |
| § 84. Skr. <i>d</i> | | 86. |
| § 85. Skr. <i>dh</i> | | 87. |

Lingual explosives.

| | | |
|-----------------------|-----------|-----|
| § 86. Skr. <i>ṭ</i> . | | 87. |
| § 87. Skr. <i>ṭh</i> | | 88. |
| § 88. Skr. <i>ḍ</i> | | 88. |
| § 89. Skr. <i>ḍh</i> | | 89. |

Guttural explosives.

| | | |
|-----------------------|-----------|-----|
| § 90. Skr. <i>k</i> . | | 89. |
| § 91. Skr. <i>kh</i> | | 90. |
| § 92. Skr. <i>g</i> | | 90. |
| § 93. Skr. <i>gh</i> | | 91. |

Palatal affricates.

| | | |
|-----------------------|-----------|-----|
| § 94. Skr. <i>c</i> . | | 91. |
| § 95. Skr. <i>ch</i> | | 91. |
| § 96. Skr. <i>j</i> . | | 91. |
| § 97. Skr. <i>jh</i> | | 92. |

Spirants.

| | | |
|-----------------------|-----------|-----|
| § 98. Skr. <i>ç</i> . | | 92. |
| § 99. Skr. <i>ṣ</i> . | | 93. |

| | |
|--------------------------------|----------|
| § 100. Skr. <i>s</i> | Page 93. |
| § 101. Skr. <i>h</i> | 93. |

PART III. SANDHI-SYSTEM.

| | |
|--|------|
| § 102. General remarks | 95. |
| § 103. Final and initial vowels | 96. |
| § 104. Simplification of consonant-groups. | 98. |
| § 105. Final nasals | 100. |
| § 106. Voiced and voiceless explosives | 101. |
| § 107. Explosives before nasals | 102. |
| § 108. Assimilation of dental explosives to palatal af- fricates, to <i>ç</i> , to linguals and to <i>ł</i> | 102. |
| § 109. Treatment of <i>-s</i> and <i>-ś</i> | 103. |
| § 110. Treatment of <i>-r</i> | 106. |
| § 111. Changes of initial consonants | 107. |

PART IV. ACCENT.

| | |
|---|------|
| § 112. The accent of the Indogermanic period | 109. |
| § 113. Accentual agreement between Sanskrit and Greek | 110. |
| § 114. Accentual agreement between Sanskrit and Ger- manic | 112. |
| § 115. Dissyllabic value of long vowels | 113. |
| § 116. Accentuation of texts | 113. |
| § 117. Enclisis | 114. |

INTRODUCTION.

§ 1. **The Indogermanic family of languages.** The great family of languages, to which Sanskrit belongs, is called the Indogermanic, Indoceltic or Aryan. I prefer the first name, because it is the most usual, though the name *Indoceltic* may claim a greater accuracy. The word *Indogermanic* dates from a time, when it was not yet proved, that the Celtic dialects also make part of our family of languages, and indicates by the combined name of the utmost branches, Indian and Germanic, the whole territory of speech, to which they belong. Now that it is certain, that Celtic also is a member of our family, it would be accurate to replace the word *Indogermanic* by *Indoceltic*, because not Germanic, but Celtic is the utmost branch to the Occident. The name *Indogermanic* however is generally adopted and it would be impossible to supplant it by another. By the word *Aryan* is generally understood a certain subdivision of the Indogermanic family, viz. the Indo-Iranian, and therefore it would seem unsuitable to use this name also for the whole Indogermanic family. See G. Meyer, *Idg. forschungen* 2, 125 sqq. and Spiegel, *Die Arische periode* (Leipzig 1887) VI sq.

The Indogermanic family consists of the following nine groups :

1. *Aryan*, see § 2.

2. *Armenian*.

3. *Phrygian-Thracian*, only known from proper names, glosses and inscriptions.

4. *Albanian*.

5. *Greek*.

6. *Italic*, which comprises not only ancient languages of Italy (Latin, Oscian, Umbrian, Samnitic), but also the modern dialects, which have sprung from popular Latin.

7. *Celtic*, which is divided into Gallic (the extinct language of ancient Gallia), Britannic (Cymric or Welsh, Cornish, Bas-Breton) and Gaelic (Scotch, Irish, Manx).

8. *Germanic*, which is commonly divided into an eastern and a western group. The eastern comprehends Gothic and Scandinavian (Icelandic, Danish, Norwegian, Swedish); to the western belong English (in its oldest literary period called Anglosaxon), Frisian and German (High-German and Low-German)

9. *Balto-Slavonic*, which consists of two groups, the Baltic and the Slavonic. The former is divided into Old-Prussian, Lithuanian and Lettish; the latter comprehends Southern-Slavonic (Ecclesiastical-Slavonic, Slovenian, Servo-Croatian, Bulgarian), Russian (Great-Russian, White-Russian, Little-Russian) and Western-Slavonic (Polish, Wendish, Bohemian and the extinct Polabie).

About the mutual relations of these groups see J. Schmidt, *Die verwandtschaftsverhältnisse der Indogermanischen sprachen* (Weimar 1872) and cf. Brugmann, *Zur frage nach den verwandtschaftsverhältnissen der Indogermanischen sprachen* (Techmer's *Internationale Zeitschr. für allgemeine sprachwissenschaft* 1, 226 sqq.).

§ 2. **The Aryan group.** The Aryan group is divided into two subdivisions:

1. *Indian*, see § 3.

2. *Iranian*.

Ancient Iranian is handed down to us in two dialects, viz. Avestian and Old-Persian. Avestian is the language of the Avesta, the sacred book of the Parsis. The oldest parts of this Zoroastrian bible date back to many centuries before Christ, and their language is more archaic than the classical dialect of the younger Avesta. This oldest Avestian is called the *Gāthā*-dialect. In Old-Persian we have only the cuneiform inscriptions of the Achaemenidian kings, the oldest of which is that of Darius Hystaspes at Behistān and dates from ± 520 before Christ. Numerous inscriptions are found on and near the ruins of Persepolis: the youngest of them is of the middle of the fourth century before Christ. See Bartholomae, *Handbuch der Altiranischen dialekte* (Leipzig 1883), *Vorgeschichte der Iranischen sprachen* (*Grundriss der Iranischen philologie* I); Williams Jackson, *An Avesta grammar* (Part I, Stuttgart 1892); Spiegel, *Die Altpersischen Keilinschriften* ² (Leipzig 1881).

The language of the Sassanidian period is called Middle-Persian, *Pahlavī* or *Huzvāresh*. The modern Iranian dialects are New-Persian, Kurdish, Ossetic, Afghan, *Balūčī* &c. Some of the principal works on these languages are: Horn, *Grundriss der Neupersischen etymologie* (Strassburg 1893); Hübschmann, *Persische studien* (Strassburg 1895), *Etymologie und lautlehre der Ossetischen sprache* (Strassburg 1887); Justi, *Kurdische grammatik* (Petersburg 1880); Trumpp, *Grammar of the Paštō* (= Afghan, London 1873); Geiger, *Etymologie des Balūčī* (München 1890), *Lautlehre des Balūčī* (München 1891); Tomaschek, *die Pamir-dialekte* (Wien 1880).

§ 3. **The Indian dialects.** In the first place is to be

mentioned the Vedic dialect, which was spoken in the Panjāb and in Kābulistān \pm 1500 before Christ. Here arose the greater part of the *ṛc*-hymns, which in a later period, when the Indo-Aryans had spread more to the East, were collected into the *Ṛgvedasamhitā*. From this time dates the greater part of the Vedic literature.

From an Indian dialect of the Veda-period sprang the *samskṛtā bhāṣā* (adorned, elaborated language) of Madhyadeśa (the Midland, on the upper course of the Gaṅgā and Yamunā), which some centuries before Christ must have been a living language, be it not in quite the same form as in most of the literary Sanskrit works. To the time, when Sanskrit was yet living as a popular language, we may refer at least the bulk of the great epic poems Mahābhārata and Rāmāyaṇa. There are several reasons to assume that this spoken Sanskrit descends from an other Old-Indian dialect than that of the Vedic hymns (cf. § 43). The most indispensable books for Sanskrit students are: Whitney, A Sanskrit grammar³ (Leipzig 1896), The roots, verb-forms and primary derivatives of the Sanskrit language (Leipzig 1885); Wackernagel, Altindische grammatik I (Göttingen 1896); Böhtlingk & Roth, Sanskritwörterbuch (Petersburg 1855—1875). See also the list of books in Lanman's Sanskrit reader (Boston 1888), XVII sqq.

While Sanskrit continued as the language of the learned and educated, there arose numerous popular dialects or Prākṛit's (*prākṛtā bhāṣā*, ordinary language), many of which are known to us, partly from separate works, partly from Sanskrit plays (fifth, sixth and following centuries after Christ). At how early a time Sanskrit can no longer have been a popular language, appears from the Prākṛit inscriptions of Aśoka, king of Pāṭaliputra, who reigned from 259 till 222 before

Christ. Particularly interesting is that Prākṛit, in which the sacred books of the southern Buddhists are written and which is called *Pāli*. Kern (*Geschiedenis van het Buddhisme in Indië*, Haarlem 1882—1884, 2, 339) says, that Pāli is a dialect, the place of which is not yet fixed with entire certainty, but that at all events it was not the language of Aṣoka and the kingdom of Magadha. Oldenberg (*Buddha*, Berlin 1881, 76) thinks, that Pāli was once the popular language of southern India. See about the ancient popular dialects of India Lassen, *Institutiones linguae Pracriticae* (Bonnae 1837); Jacobi, *Ausgewählte erzählungen in Mahārāṣṭrī* (Leipzig 1886); Ernst Kuhn, *Beiträge zur Pāli-grammatik* (Berlin 1875) and other works.

From these Prākṛits descend the modern Aryan vernaculars of India: Hindī (intermixed with numberless Persian and Arabian words it is called Hindustānī or Urdū), Panjābī, Sindhī, Gujarāṭī, Marāṭhī, Oriya, Bengālī &c. See Beames, *A comparative grammar of the modern Aryan languages of India* (London 1872—1879).

§ 4. **Sounds and letters.** The oldest Indian writing, that is known to us, is found in the inscriptions of Aṣoka: here we distinguish two different systems of characters, one of which has been evidently derived from a Semitic alphabet and the other may be of the same origin. From the latter descend the younger Indian alphabets, to which belongs Devanāgarī, properly the alphabet of Hindustān. The natives of India write Sanskrit in different modes, but by western scholars Devanāgarī is only used.

Here I give a list of the Sanskrit letters, according to the most usual system of transliteration: each character has always the same phonetic value and all sounds of the language are represented by a separate character.

Vowels.

*a, ā, i, ī, u, ū.**e, o.**r, ṛ, ḷ, ḻ.*

Diphthongs.

āi, āu.

Mutes.

Gutturals: *k, kh, g, gh.*Linguals: *ṭ, ṭh, ḍ, ḍh.*Dentals: *t, th, d, dh.*Labials: *p, ph, b, bh.*

Palatal affricates.

c, ch, j, jh.

Nasals.

ṇ, ñ, ṇ, n, m and the anusvāra and anunāsika, which in transliteration are both written *m*.

Liquids.

r, ḷ.

Semivowels.

y, v.

Sibilants.

ś, ṣ, s.

Aspiration.

h and the visarga *ḥ*.

The usual order of arrangement is slightly different from that given above.

A few words must be said on the phonetic value of the Devanāgarī letters.

The *a*, *i* and *u* are short vowels: their pronunciation is nearly the same as in German. The corresponding long vowels are *ā*, *ī*, *ū*.

The *e* and *o* are long vowels with a narrow pronunciation: they are contractions of *ai* and *au*.

The *r* and *l* are sonant liquids; *ṛ* and *ḷ* are the corresponding long ones, but *ḷ* does not occur in a single genuine Sanskrit word.

The *āi* and *āu* are diphthongs: their first component *ā* is long, the second components are the semivowels *i* and *u*.

The *k* and *g* are the ordinary European *k*- and *g*-sounds. Their corresponding aspirates are *kḥ* (*k* + *h*) and *gḥ* (*g* + *h*).

The *t* and *d* are distinguished from the dentals by turning up the tip of the tongue to the palate. Their corresponding aspirates are *tḥ* (*t* + *h*) and *dḥ* (*d* + *h*).

The *t* and *d* are ordinary dentals, i. e. they are formed by turning up the tip of the tongue to the upper teeth. Their corresponding aspirates are *tḥ* (*t* + *h*) and *dḥ* (*d* + *h*).

The *p* and *b* are ordinary labials and *pḥ* (*p* + *h*) and *bḥ* (*b* + *h*) are their corresponding aspirates.

The *c* and *j* are palatal affricates: *c* consists of *t* + *ś* and *j* of *d* + *ž*. Engl. *ch* in *chaff*, *chain*, *choose*, *churl* and *g*, *j* in *gem*, *gentleman*, *gin*, *jail*, *jam*, *jest*, *jockey* are nearly the same sounds.

Each of the nasals is akin to one of the series of consonants given above: the *ṇ* is guttural (= engl. *ng* in *long*, *sing*), the *ṇ* lingual, the *n* dental, the *m* labial and the *ṁ*

palatal. By *m̐* (anusvāra and anunāsika) is indicated the nasal pronunciation of a preceding vowel.

The *r* must have been a lingual sound, because it has the power to lingualize neighbouring dentals. The *l* is a dental sound.

The *y* is a semivowel, which is closely related to the vowel *i*; i. e. it is a consonant *i* like engl. *y* in *year*, *yard*, *yoke*. The *v* originally stood in the same relation to *u* and had the sound of engl. *w* in *wall*, *word*, *wear*, but from an early time it was changed to a spirant (engl. *v* in *veil*, *vain*, *vine*), except when preceded by a consonant in the same syllable.

The *ç* is palatal like engl. *sh* in *short*, *shield*, *shut*. The *ṣ* is lingual and distinguished from the *s* in the same way as *ṭ*, *ḍ*, *ṇ* from *t*, *d*, *n*. The *s* is our ordinary surd *s*.

By *h̐* and *ḥ* are understood our usual *h* (spiritus asper), but the visarga (*ḥ*) is usually neglected by us in the pronunciation of Sanskrit words.

PART I.

SYSTEM OF VOWELS.

A. THE REPRESENTATION OF THE INDOGERMANIC VOWELS IN SANSKRIT.

§ 5. **The Indogermanic vowels in general.** There was a great variety of vowels in the mother-language, but their accurate pronunciation is not definable. We indicate these vowels by the following letters:

a, ā; e, ē; o, ō; ə; i, ī; u, ū.

The *e, ē, o, ō* had a broad pronunciation. The *ə* was perhaps something between *a* and engl. *e* in *oldest, father*.

There were also sonant nasals and liquids, which are written *m̐, n̐, r̐, l̐*. We understand by *n̐* not only the dental *n*-sonans, but also the palatal and guttural sonant nasals. Some scholars deny the existence of these sounds in the mother-language: see Bechtel, *Die hauptprobleme der Indogermanischen lautlehre seit Schleicher* (Göttingen 1892), 114 sqq. and J. Schmidt, *Kritik der sonantentheorie* (Weimar 1895), cf. Hirt, *Idg. forschungen* 7, 147 sqq.

Combinations of vowels with semivowels, nasals and liquids were very common:

aị, āị, eị, ēị, oị, ōị;
aụ, āụ, eụ, ēụ, oụ, ōụ;
am, ām, em, ēm, om, ōm, əm;
an, ān, en, ēn, on, ōn, ən;
ar, ār, er, ēr, or, ōr, ər;
al, āl, el, ēl, ol, ōl, əl.

Many scholars assume, that there were also long sonant nasals and liquids in the mother-language. See de Saussure, *Mémoire sur le système primitif des voyelles dans les langues Indo-Européennes* (Paris 1887), 262 sqq. and Brugmann, *Grundriss der vergleichenden grammatik der Indogermanischen sprachen* (Strassburg 1886—1893), 1, 208 sq. 243 sqq.: against this theory Bechtel 203 sqq.

§ 6. **The Indogermanic vowel-gradation.** The Indogermanic mother-language had four series of vowels, based on *e*, *ē*, *ā* and *ō*. De Saussure 134 sqq. has tried to prove, that the long base-vowels *ē*, *ā*, *ō* are contractions of *e* with a short vowel and considers the *ē*-, *ā*- and *ō*-series only as special cases of the *e*-series.

Hübschmann, *Das Indogermanische vocalsystem* (Strassburg 1885), Brugmann 1, 248 sqq., Bartholomae, *Bezz. Beitr.* 17, 91 sqq. and others assume an *a*-series and an *o*-series besides the four given above. Against this opinion Bechtel 256 sqq.

The base-vowels *e*, *ē*, *ā*, *ō* were weakened in all syllables, which had but a slight accent or no accent at all. In the latter case the radical vowel was lost without leaving any trace, but in syllables with a slight accent *e* was reduced to *ə* (Bartholomae, *Bezz. Beitr.* 17, 109 sqq., cf. also skr. *timirá-s* 'dark': *támas* 'darkness'), *ē* to *e* or *ə*, *ā* to *a* or *ə*, *ō* to *o* or *ə* (Bechtel 248).

But a regular vowel-exchange is found also in accentuated

syllables: so we have an *ablaut* $e : o$, $\bar{e} : \bar{o}$, $\bar{a} : \bar{a}$, but the base-vowel \bar{o} is not met with in a modified form. The causes of this *ablaut* are not yet clear. Kretschmer (Kuhn's Zeitschr. 31, 366 sqq.) has shown, that G. Meyer's way of explaining it (Kuhn's Zeitschr. 24, 227 sqq.) can not be the right one.

The base-vowel e (o) often was lengthened to \bar{e} (\bar{o}): Streitberg (Idg. forschungen 3, 305 sqq.) has tried to explain this phenomenon. I see no reason to admit with Bartholomae, that there was also a *dehnstufe* of \bar{e} , \bar{a} , \bar{o} .

I. e -series.

| Weak: | Strong: | Lengthened: |
|---|---|---|
| A. — , ϑ . | e , o . | \bar{e} , \bar{o} . |
| B. $\dot{\imath}$ (i), $\bar{\imath}$. | $e\dot{\imath}$ ($\dot{\imath}e$), $o\dot{\imath}$ ($\dot{\imath}o$). | $\bar{e}\dot{\imath}$ ($\dot{\imath}\bar{e}$), $\bar{o}\dot{\imath}$ ($\dot{\imath}\bar{o}$). |
| C. \underline{u} (u), \bar{u} . | $e\underline{u}$ ($\underline{u}e$), $o\underline{u}$ ($\underline{u}o$). | $\bar{e}\underline{u}$ ($\underline{u}\bar{e}$), $\bar{o}\underline{u}$ ($\underline{u}\bar{o}$). |
| D. m (\underline{m}), ϑm ($m\vartheta$). | em (me), om (mo). | $\bar{e}m$ ($m\bar{e}$), $\bar{o}m$ ($m\bar{o}$). |
| E. n (\underline{n}), ϑn ($n\vartheta$). | en (ne), on (no). | $\bar{e}n$ ($n\bar{e}$), $\bar{o}n$ ($n\bar{o}$). |
| F. r (\underline{r}), ϑr ($r\vartheta$). | er (re), or (ro). | $\bar{e}r$ ($r\bar{e}$), $\bar{o}r$ ($r\bar{o}$). |
| G. l (\underline{l}), ϑl ($l\vartheta$). | el (le), ol (lo). | $\bar{e}l$ ($l\bar{e}$), $\bar{o}l$ ($l\bar{o}$). |

When e was lost before (or after) $\dot{\imath}$, \underline{u} , m , n , r , l these semivowels, nasals and liquids remained consonant before vowels, but became sonant before consonants. Concerning $\bar{\imath}$, \bar{u} , ϑm , ϑn , ϑr , ϑl must be observed, that they occur not only as ϑ -degree of $e\dot{\imath}$, $e\underline{u}$, em , en , er , el , but also as weakest degree of $e\dot{\imath}e$, $e\underline{u}e$, eme , ene , ere , ele : see de Saussure 239 sqq.; Brugmann 1, 104 sqq.; Bartholomae, Bezz. Beitr. 17, 109 sqq. I assume with Bartholomae, that $\bar{\imath}$ and \bar{u} are contractions of $\vartheta + \dot{\imath}$ and $\vartheta + \underline{u}$ and stand on a level with ϑm , ϑn , ϑr , ϑl .

II. \bar{e} -series.

| Weak: | Strong: |
|--|---|
| A. — , \bar{e} , e . | \bar{e} , \bar{o} . |
| B. \bar{i} (i), \bar{i} , $e\bar{i}$ ($i\bar{e}$). | $\bar{e}\bar{i}$ ($i\bar{e}$), $\bar{o}\bar{i}$ ($i\bar{o}$). |
| C. \bar{u} (u), \bar{u} , $e\bar{u}$ ($u\bar{e}$). | $\bar{e}\bar{u}$ ($u\bar{e}$), $\bar{o}\bar{u}$ ($u\bar{o}$). |

The relation of \bar{i} , \bar{u} to i , u in $\bar{e}\bar{i}$ - ($i\bar{e}$ -) and $\bar{e}\bar{u}$ - ($u\bar{e}$ -) roots is the same as in $e\bar{i}$ - ($i\bar{e}$ -) and $e\bar{u}$ - ($u\bar{e}$ -) roots: we find \bar{i} , \bar{u} before vowels and i , u before consonants. About the $\bar{e}\bar{i}$ - and $\bar{e}\bar{u}$ -roots see Schulze, Kuhn's Zeitschr. 27, 420 sqq.; Wiedemann, Das Litauische praeteritum (Strassburg 1891), 25 sqq. 32.

III. \bar{a} -series.

| Weak: | Strong: |
|--|---|
| A. — , \bar{a} , a . | \bar{a} , \bar{o} . |
| B. \bar{i} (i), \bar{i} , $a\bar{i}$ ($i\bar{a}$). | $\bar{a}\bar{i}$ ($i\bar{a}$), $\bar{o}\bar{i}$ ($i\bar{o}$). |
| C. \bar{u} (u), \bar{u} , $a\bar{u}$ ($u\bar{a}$). | $\bar{a}\bar{u}$ ($u\bar{a}$), $\bar{o}\bar{u}$ ($u\bar{o}$). |

Concerning the roots with \bar{i} , \bar{u} we must observe, that the mutual relation of \bar{i} , \bar{u} and i , u in the weakest degree is the same as in the e - and \bar{e} -series. About the *ablaut* in $\bar{a}\bar{i}$ - and $\bar{a}\bar{u}$ -roots see Schulze, Kuhn's Zeitschr. 27, 420 sqq.; Kretschmer, Kuhn's Zeitschr. 31, 385 sqq.; Wiedemann 29. 32 sq.

IV. \bar{o} -series.

| Weak: | Strong: |
|--|--------------------|
| A. — , \bar{o} , o . | \bar{o} . |
| B. \bar{i} (i), \bar{i} , $o\bar{i}$. | $\bar{o}\bar{i}$. |
| C. \bar{u} (u), \bar{u} , $o\bar{u}$. | $\bar{o}\bar{u}$. |

The relation of \bar{i} , \bar{u} to i , u in the weakest degree of roots with \bar{i} , \bar{u} is the same as in the e -, \bar{e} - and \bar{a} -series. About the $\bar{o}\bar{i}$ - and $\bar{o}\bar{u}$ -roots see Schulze, Kuhn's Zeitschr. 27, 420 sqq.;

Kretschmer, Kuhn's Zeitschr. 31, 385 sqq.; Wiedemann 29, 33 sqq.; Bechtel 274.

Examples of the vowel-gradation.

I. *e*-series.

The noun-stem **ped-*. Weak: ved. *upabḍá-*, trampling, noise, avest. *fraḥda-*, fore part of the foot, gr. ἐπίβδαι, the day after a festival. Against our expectation we find the unweakened *e* in the gen. sing. skr. *padás*, lat. *pedis*. Strong: gr. πόδα. Lengthened: lat. *pēs*; gr. dor. πώς, goth. *fōtus*, skr. acc. sing. *pādam*, nom. sing. *pāt*.

The suffix *-ter-*, for instance in **pater-*. Weak: gen. sing. gr. πατρός, goth. *fadrs*; loc. plur. skr. *pitṛṣu*, gr. πατράσι. Strong: acc. sing. skr. *pitāram*, gr. πατέρα; gr. εὐπάτορα. Lengthened: nom. sing. skr. *pitā*, gr. πατήρ; gr. εὐπάτωρ.

Also the suffixes *-en-*, *-men-* (weak before vowels *-n-*, *-mn-*; before consonants *-ṇ-*, *-mṇ-*) and numerous verbal roots as **pet-*, to fly, **bheṇid-*, to split, **bheṇdh-*, to perceive, **gem-*, to go, **men-*, to think, **bher-*, to bear, **kel-*, to raise up.

II. *ē*-series.

The root **dhē-*, to put. Weak: 1 pers. plur. praes. ind. act. skr. *dadhmás*; part. perf. pass. skr. *-dhita-s*, *hitá-s*, lat. *crēditus*; gr. θετός, ἔθετο. Strong: 1 pers. sing. praes. ind. act. skr. *dádhāmi*, gr. τίθημι; gr. θωμός, heap, goth. *dōms*, judgment.

The root **sē-*, to throw. Weak: lat. *satus*; gr. έτός. Strong: gr. ἵημι, lat. *sēvi*, *sēmen*; gr. ἀφέωκα, goth. *saísō*.

III. *ā*-series.

The root **sthā-*, to stand. Weak: ved. *savyeṣṭhā* (*savyeṣṭhár-*), the warrior, who stands on the left of the charioteer; part. perf. pass. skr. *sthitá-s*, gr. στατός. Strong: 1 pers. sing. praes. ind. act. skr. *tísthāmi*, gr. ἵστημι.

The root **āḡ-*, to drive. Weak: ved. *jmán-*, path, way; 1 pers. sing. praes. ind. act. (originally **aḡō*) skr. *ájāmi*, gr. *ἄγω*, lat. *agō*. Strong: skr. *ājís-*, race, contest, gr. *στρατηγός*, lat. *ambāges*; gr. *ἀγωγή*.

IV. *ō*-series.

The root **dō-*, to give. Weak: skr. part. perf. pass. *ā-tta-s*, taken away, ved. *devá-tta-s*, given by a god; gr. *δάνος*, lat. *datus*, *dator*; gr. *δοτός*. Strong: 1 pers. sing. praes. ind. act. skr. *dádāmi*, gr. *δίδωμι*, lat. *dōnum*.

The root **ōd-*, to smell. Weak: gr. *ὄζω*, *ὀδμή*, lat. *odor*, *oleo*. Strong: gr. *ὀδωδα*, *εὐώδης*.

Cf. Brugmann 1, 250 sqq., who differs in many points from the exposition given above.

It can not be denied, that it is very difficult to distinguish the *ē*-series from the *ā*-series, cf. skr. *cāru-*, gladsome, pleasant: lat. *cārus*, goth. *hōrs*; ohg. *stēm*, *stām*: gr. *ἴστημι* (dor. *ἴστᾱμι*), skr. *tīṣṭhāmi* &c.

§ 7. **Idg. a.** The idg. *a* is represented in Aryan by *a*. Tautosyllabic *aṯ*, *au* were contracted in Sanskrit to *e*, *o*.

idg. **aḡō*: skr. *ájāmi* (for **ajāmi*, **ajá*), I drive, gr. *ἄγω*, lat. *agō*, icel. inf. *aka*.

idg. **aḡrós*: ved. *ájra-s*, field, plain, gr. *ἄγρός*, lat. *ager*, goth. *akrs*.

idg. **āks-*: skr. *ákṣa-s*, axle, gr. *ἄξων*, lat. *axis*, ohg. *ahsa*.

idg. **ākro-s*: skr. *-aṣra-*, angle (angular), gr. *ἄκρος*, cf. lat. *acer* (**ākro-s*) and ved. *ácma* (*n*), stone, gr. *ἄκμων*.

idg. **ánḡhos*: ved. *ámhas*, distress, lat. *angus-* in *angustus*, cf. ved. *amhú-*, narrow, goth. *aggwus* and also gr. *ἄγχω*, lat. *angō*, gr. *ἄγχι*, *ἄγχου* &c.

idg. **anə-*, **ane-*: skr. *ániti*, he breathes, *anilá-s*, wind, gr. *ἄνεμος*, lat. *animus*, *anima*, goth. praet. *uzōn*, expired.

idg. **anti*: ved. *ánti*, opposite, before, gr. *ἀντί*, lat. *ante*, goth. *and*.

idg. **apo*: skr. *ápa*, away, forth, off, gr. *ἀπό*, goth. *af*.

idg. **arġ-*: skr. *árjuna-s*, white, ved. *rajatá-s*, silvery, skr. *rajatá-m*, silver (perhaps idg. **raġ-* by the side of **arġ-*; Avestian has *ērēzata-*, silver), gr. *ἄργυρος*, lat. *argentum*.

idg. **ġhans-*: skr. *hamsá-s*, goose, swan, gr. *χήν*, lat. *anser* (**hanser*), ohg. *gans*.

idg. **iaġ-* (weak form of **iāġ-*): skr. *yájāmi* (for **yajāmi*, idg. **iaġō*), I worship, gr. *ἱζομαι* (**iaġ-iō-mai*), cf. skr. *yajñá-s*, worship, sacrifice, gr. *ἱγνός* (idg. **iaġnó-s*), ved. *yajás*, worship, gr. *ἱγος* (idg. **iaġos*), ved. *yajya-*, venerable, gr. *ἱγιος* (idg. **iaġiō-s*, **iaġiio-s*).

idg. **kakud-*, **kakūd-*: skr. *kakút* (*d*), *kakúdmān* (*nt*), top, summit, lat. *cacūmen* (**cacūdmen*).

idg. **kark-*: skr. *karká-s*, *karkaṭa-s*, crab, gr. *καρκίνος*, lat. *cancer* (**carcer* or **carcen*?)

idg. **maḍ-*: ved. *mádāmi* (**maḍāmi*), I am drunk, gr. *μαδάζω*, lat. *madeō* (see Zubatý, Archiv f. Slav. phil. 13, 418 sqq.).

idg. **skandō*: skr. *skándāmi* (**skandāmi*), I spring, lat. *scandō*.

Heterosyllabic *aḷ*, *au*:

idg. **saḷó-*: ved. *sayatvá-m*, tie, from the root **sāḷ-*, **saḷ-*, see below.

idg. **auḍ-*: skr. *ávāmi* (**avāmi*), I help, I protect, cf. lat. *aveō*.

Tautosyllabic *aḷ*, *au*, contracted to *e*, *o*:

idg. **aḷdh-*: skr. *édhas*, fuel, gr. *αἶθω*, lat. *aedes*, also ohg. *eit*, ags. *ād*, funeral pile.

idg. **saḷ-* (weak form of **sāḷ-*): skr. *sétu-s*, joining, dam, bridge, ved. *setár-*, who binds, lat. *saeta*, bristle, ohg. *seil*, ags. *sāda*, snare, string.

idg. **aug-*: skr. *ójas*, ved. *ojmán-*, strength, power, lat. *augustus*, *augmentum*, *augeō*, goth. *aukan*, cf. gr. *αὐξάνω*, lat. *auxilium*.

§ 8. Idg. *ā*. Idg. *ā* = skr. *ā*:

idg. **āgi-s*: skr. *ājí-ṣ*, race, contest, cf. gr. *στρατηγός* (*στρα-τᾶγός*) and skr. *samāja-s*, meeting, company. A weak form of the root is found in skr. *ājāmi*, gr. *ἄγω*, lat. *agō*, icel. inf. *aka*.

idg. **iāgo-s*: skr. *-yāja-*, sacrifice (*yāga-* has got *g* by analogy), cf. skr. *yājāmi*, avest. *yazāmi*, gr. *ἄζομαι*.

idg. **bhāghu-s*: skr. *bāhú-ṣ*, arm, gr. *πῆχυς*, dor. *πᾶχυς*, ohg. *buog*.

idg. **bhrāter-*: skr. *bhrātā* (*r*), gr. *Φράτηρ*, lat. *frāter*, goth. *brōþar*.

idg. **māter-*: skr. *mātā*, gr. *μήτηρ*, dor. *μᾶτηρ*, lat. *māter*, ohg. *muoter*.

idg. **sthā-*: skr. *tísthāmi*, I stand, gr. *ἵστημι*, dor. *ἵστᾶμι*, lat. *stāre*.

idg. **ékhū*: skr. *áçvā*, mare, lat. *equa*.

Heterosyllabic *āi*, *āu*:

idg. **sāio-*: skr. *sāyá-m*, evening, if it belongs to **sāi-*, **sai-*, to bind, to fasten, to loosen (for the signification cf. gr. *βουλύτόνδε*).

idg. **dāuo-*: skr. *dāvā-*, burning, fire, cf. gr. *δήιος*, *δέδηε*. Weaker forms of this root are contained in gr. *δαίω* (idg. **dauiō*), skr. *dunómi*, I burn, I torture (idg. **dunéumi*).

idg. **nāum*: skr. acc. sing. *nāvam*, ship, gr. *νήα*, lat. *nāvem*, cf. icel. dat. *nói*.

Tautosyllabic *āi*, *āu*:

idg. *-āi*: ved. dat. sing. fem. *suṇapatyāi*, to her who has good offspring, gr. *χώρα*, olat. *Mātūtā*, goth. *gibai*.

idg. **nāu-s*: skr. *nāu-s*, ship, gr. *ναῦς*, cf. icel. *naust*.

§ 9. **Idg. e.** The idg. *e* became *a* before the separation of Indian and Iranian and fell together with the idg. *a* (see § 7) and *o* (see § 11). This change took place after the palatalization of gutturals: see § 53.

idg. **ésti*: skr. *ásti*, is, gr. *ἔστι*, lat. *est*, goth. *ist*.

idg. **é-bherom*: skr. *ábharam*, I bore, gr. *ἔφερον*.

idg. **bhérō*: skr. *bhárāmi*, I bear, gr. *φέρω*, lat. *ferō*, goth. *baíra*.

idg. **génos*, **génes-*: ved. *jānas*, family, race, gr. *γένος* (gen. *γένεος*), lat. *genus* (gen. *generis*).

idg. **ghen-*: skr. *hánmi*, I beat, I kill, gr. *θείνω*.

idg. **ghéros*: ved. *hāras*, heat, gr. *θέρω*.

idg. **nébhos*: skr. *nábhas*, cloud, sky, gr. *νέφος*, cf. gr. *νεφέλη*, lat. *nebula*, ohg. *nebul*.

idg. **pénige*: skr. *pāñca*, five, gr. *πέντε*, lat. *quinque*, goth. *fimf*.

idg. **peq-*: skr. *pácāmi*, I cook, gr. *πέσσω*, lat. *coquō*.

idg. **péri*: skr. *pári*, around, gr. *περί*, goth. *faír-*.

idg. **pet-*: skr. *pátāmi*, I fly, I fall, gr. *πέτομαι*, *πίπτω*, lat. *petō*.

idg. **qe*: skr. *ca*, and, gr. *τε*, lat. *que*.

idg. **qeru-s*: skr. *carí-s*, kettle, pot, a certain offering-porridge, icel. *hverr*.

idg. **qetvōres*: skr. *catvāras*, four, goth. *fidwōr*, cf. lat. *quatuor* and gr. *τέσσαρες*.

idg. **régos*, **réges-*: skr. *rājas*, atmosphere, mist, gloom, dust, darkness, goth. *riqis*, cf. gr. *ἔρεβος* (**eregos*).

idg. **séghos*, **séghes-*: skr. *sáhas*, strength, might, violence, goth. *sigis*, cf. skr. *sáhāmi*, I overpower, I withstand, gr. *ἔχω*.

idg. **ueghō*: skr. *váhāmi*, I carry, gr. *pamphyl. ῥέχω*, lat. *vehō*, goth. *-wiga*.

idg. **ul̥qe*, **lúqe*: skr. *vṛka*, voc. wolf, gr. *λύκε*, cf. lat. *lupe* (only for the ending of the vocative; the word *lupus* is to be separated from *λύκος*). Goth. *wulf* has lost the *auslaut-e*.

idg. **bhéréthe*, **bhéréte*: skr. *bháratha*, you bear, gr. *φέρετε*, goth. *baíriþ*.

Heterosyllabic *eḷ*, *eṽ*:

idg. **qeḷ*:- ved. *cáyate*, punishes, gr. arcad. *τείω*.

idg. **smeḷ*:- skr. *smáyate*, smiles, cf. gr. *μειδιάω*, *Φιλομ-μειδής*, engl. *smile*.

idg. **klémos*: skr. *grávas*, glory, fame, gr. *κλέος*.

Tautosyllabic *eḷ*, *eṽ* = skr. *e*, *o* (contracted from *aḷ*, *aṽ*):

idg. **éḷmi*: skr. *émi*, gr. *εἶμι*.

idg. **ǵhéimen*:- ved. *héman*-, winter, gr. *χεῖμα*, *χειμῶν*.

idg. **bhéṽdhō*: skr. *bódhāmi*, I perceive, goth. *biuda*, cf. gr. *πυνθάνομαι*, *πεύθομαι*.

idg. **ǵenster*:- ved. *jōṣṭár*-, *jóṣṭar*-, loving, cf. gr. *γευστήριον*, goblet, and skr. *juṣáte*, is glad, loves, gr. *γεύω*, lat. *gustus*, goth. *kiusan*, *kustus*.

§ 10. Idg. *ē*. The idg. *ē* became *ā* before the end of the Aryan period, but after the palatalization of gutturals (see § 53). So it fell together with the idg. *ā* (see § 8) and *ō* (see § 12).

idg. **ēd*:- skr. (Pāṇini) *áda*, have (has) eaten, *ādiván* (*ins*), having eaten, gr. *ἐδηδώς*, lat. *ēdimus*, goth. *ētum*.

idg. **ēsṃ*: skr. *ásam*, I was, gr. hom. *ἦα*.

idg. **dhē*:- skr. *dádhāmi*, I put, gr. *τίθημι*.

idg. **ǵēni*:- skr. *-jāni*-, wife, goth. *ǵēns*.

idg. **plē*:- ved. *prātá*-, *prāṇa*-, full, gr. *πλήρης*, lat. *plēnus*, *-plētus*.

idg. **rēǵ*:- skr. *rāj*- (nom. *rát* instead of **rāk*, idg. **rēks*), king, lat. *rēx*, gall. *-rīx* (goth. *reiks* is of Celtic origin).

idg. **uēti*: skr. *vāti*, blows, gr. *ἄησι* (**auēti*), cf. goth. *waian*.

idg. **dusmenēs*: skr. *durmanās*, dejected, gr. *δυσμενής*.

idg. **siēs*, **siēs*: skr. *syās* (*siyās*), thou mayst be, lat. *siēs*, cf. gr. *εἷης* (**es-iēs* for **s-iēs*).

idg. **mātē(r)*: skr. *mātā*, mother, gr. *μήτηρ*, lat. *māter*, ohg. *muoter*. The *-ter-* stems in Lithuanian have the nominative in *-tė*; so lith. *motė*, wife, = skr. *mātā*.

Heterosyllabic *ēi*, *ēu*:

idg. **uēiu-s*: skr. *vāyú-s*, wind, air, cf. *vāti*, gr. *ἄησι*.

idg. **dhéuō*: skr. *dhāvāmi*, I run, cf. gr. *θέω*.

Tautosyllabic *ēi*, *ēu*:

idg. **é-dēiksm̐*: skr. **ádāikṣam*, I showed, gr. *ἔδειξα*.

idg. **diēu-s*: skr. *dyāu-s*, heaven, gr. *Ζεύς*.

§ 11. **Idg. o.** The idg. *o* became *a* before the separation of Indian and Iranian and fell together with the idg. *a* (see § 7) and *e* (see § 9). Cf. however P. B. Beitr. 22, 546, where I have suggested a restriction of this rule.

idg. **oktōu*, **oktō*: skr. *aṣṭāu*, ved. *aṣṭā*, eight, gr. *ὀκτώ*, lat. *octō*, goth. *ahtau*.

idg. **opos*: ved. *ápas*, work, lat. *opus*.

idg. **osth-*: skr. *ásthi*, bone, gr. *ὀστέον*, lat. *os* (gen. *ossis* from **osthes*, see Zubatý, Kuhn's Zeitschr. 31, 6).

idg. **bhéronti*: skr. *bháranti*, they bear, gr. *φέρουσι*, dor. *φέρουντι*.

idg. **dedórke*: skr. *dadárça*, has seen, gr. *δέδορκε*.

idg. **dor-kéiō*: skr. *darçáyāmi*, I let see, I show, goth. *gatarhja*.

idg. **dómo-s*, **domu-s*: ved. *dāma-s*, house, gr. *δόμος*, lat. *domus*.

idg. **gēgóna*: skr. *jajāna*, I produced, gr. *γένονα*.

idg. **ghono-s*: skr. *ghaná-s*, slayer (ved.), compact, compacted mass, cloud, gr. *φόνος*, cf. skr. *hánmi*, gr. *θίνω*.

idg. **koksā*: skr. *kakṣā* (*kákṣa-s*), region of the girth, girdle, cincture, circular wall, enclosed court, lat. *coxa*, mhg. *hahse*.

idg. **qotero-s*: skr. *katará-s*, who (from two), gr. *πότερος*, ion. *κότερος*, cf. goth. *hwapar*.

idg. **moni-s*: skr. *maní-ṣ*, jewel (though Vedic, this word must be a prācritism; genuine-skr. would be **mani-ṣ*), os. *meni*, cf. lat. *monile*.

idg. **póti-s*: skr. *páti-ṣ*, lord, husband, gr. *πόσις*, goth. *-faps*, cf. the feminine idg. **pótnī* (gen. **potniīēs* or **potniīās*): skr. *pátnī*, lady, mistress, wife, gr. *πότνια*.

idg. **próti*: skr. *práti*, against, gr. *πρότι* (*πρός*).

idg. **rótho-s*, **rothā*: skr. *rátha-s*, chariot, lat. *rota*, ohg. *rad*. Cf. also gr. *ρόθος*, which allows however an other explication.

idg. **uḷqo-s*, **lúqo-s*: skr. *vṛka-s*, wolf, gr. *λύκος*, goth. *wulfs*.

idg. **é-bhereto*: skr. *ábharata*, gr. *ἐφέρετο*, 3 pers. sing. imperf. med. from the root **bher-*, to bear.

Heterosyllabic *oi*, *ou*:

idg. **duoió-s*: skr. *dvayá-s*, double, gr. *δοιός*.

idg. **óui-s*: skr. *ávi-ṣ*, sheep, gr. *οῖς*, *οἷς*, lat. *ovis*, ohg. *awi*.

Tautosyllabic *oi*, *ou* = skr. *e*, *o* (contracted from *ai*, *au*):

idg. **lelóiqa*: skr. *rivéca*, I left, gr. *λέλοιπα*, goth. *laihwa*.

idg. **uóida*: skr. *véda*, I know, gr. *οἶδα*, goth. *wait*.

idg. **bhéroiς*: skr. *bháreṣ*, thou mayst bear, gr. *Φέροις*, goth. *baírais*.

idg. **bhebhóyda*: skr. *bubódha*, I perceived, cf. goth. *baup*.

idg. **súnóys*: skr. *sūnós*, goth. *sunaus*, gen. of skr. *sūnáv-ṣ*, son, goth. *sunus*.

I can not agree with Brugmann (Kuhn's Zeitschr. 24, 1 sqq., Morphol. unters. 3, 91 sqq.), Osthoff (Morphol. unters. 1, 207 sqq. note, cf. 4, 303 note), Streitberg (Idg. forschungen 3,

364 sqq.) and others, who suppose, that the idg. *o* in Aryan always became *ā* in open syllables. J. Schmidt (Kuhn's Zeitschr. 25, 1 sqq.) and Meillet (Mém. de la Soc. de Ling. 9, 142 sqq.) have proved, that the idg. *o* in open syllables generally is represented by *a*. The *ā* of skr. *jānu*, knee, must not be compared with the *o* of gr. γόνυ, but with the *ω* of gr. γωνία and skr. *dāru*, wood, is not identical with gr. δόρυ, but differs from it in the radical vowel (*ō* : *o*). So the *ā* of skr. *pādam*, *dātāram* does not correspond to the *o* of gr. πόδα, δώτορ, but to the *ō* of gr. dor. πώς, lat. *datōrem*. About the vocalisation of the causatives (skr. *svāpāyāmi* = lat. *sōpiō*) and iteratives (ved. *patāyāmi*, cf. gr. ποτέομαι) see not only Meillet, but also Delbrück, Idg. forschungen 4, 132 sq.

De Saussure 96 sq. and Bartholomae (Bezz. Beitr. 17, 93, 103) have made probable, that there was originally a difference between the *o* in the *e*-series and the *o*, which is weakened from *ō* : in Armenian *o* : *e* is represented by *o*, but *o* : *ō* has become *ā*. In as early a period as the Aryan or Indo-Iranian these two *o*'s had fallen together.

§ 12. Idg. *ō*. The idg. *ō* became *ā* and fell together with the idg. *ā* (see § 8) and *ē* (see § 10). This transition took place in the same time as the change of *o* to *a*, i. e. in the Aryan period (see § 11).

idg. **ōkú-s*: skr. *ācú-s*, swift, gr. ὤκυς, cf. lat. comp. *ocior*.

idg. **ōmó-s*: skr. *āmá-s*, raw, gr. ὠμός.

idg. **dōno-m*: skr. *dāna-m*, gift, lat. *dōnum*, cf. idg. **didōti*, skr. *dádāti* (for **didāti*), gives, gr. δίδωσι.

idg. **ulqōd*: skr. *vṛkāḍ*, abl. of *vṛka-s*, wolf, cf. the Latin ablatives ending in *-ōd*, *-ō*.

idg. **bhéretōd*: ved. *bhāratūd*, must bear, gr. Φερέτω, cf. lat. *fertō*.

idg. **swésō(r)*: skr. *svásā (r)*, sister, lat. *soror*, goth. *swistar*,
cf. gr. ἑορ· θυγάτηρ, ἀνεψιός.

idg. **bhērō*: skr. *bhārāmi* (**bhārā*), gr. Φέρω, lat. *ferō*, goth. *baíra*.

Heterosyllabic *ōḷ*, *ōu*:

idg. **pōḷu-*: ved. *pāyú-s*, guarding, protecting, protector,
gr. πῶν. The root is **pōḷ-* (**pō-*: skr. *pāti*, protects), **poḷ-*
(gr. ποιμήν), **pī-* (ved. *-pīti-*).

idg. **dōuēn-*, **dōmen-*: ved. inf. *dāvāne*, *dāmane*, to give,
cf. gr. δοῦναι (δοφέναι), δόμεναι.

Tautosyllabic *ōḷ*, *ōu* (of *ōḷ* no example):

idg. **gōu-s*: skr. *gāu-s*, cow, bull, gr. βούς, lat. *bōs* (**vōs*),
ohg. *chuo*.

§ 13. **Idg. ə.** The idg. *ə* in general is represented in Aryan by *i*. So this Indo-Iranian *i* can be a weak form of *a* (idg. *e*) as well as of *ā* (idg. *ē*, *ā*, *ō*). The tautosyllabic vowel-combinations *əḷ*, *əu* had been contracted to *ī*, *ū* before the end of the Indogermanic period.

Examples of *ə : e* (Bartholomae):

idg. **anə-*, **ane-*: skr. *ānīmi*, I breathe, *anilā-*, wind: gr. ἀνεμος.

idg. **bherə-tro-m*, **bhere-tro-m*: ved. *bharitra-m*, arm: gr. Φέρετρον, lat. *feretrum*.

idg. **genə-tō(r)*, **gene-tō(r)*: skr. *janitā (r)*, father: gr. γενέτωρ.

idg. **isə-ró-s*, **ise-ró-s*: ved. *iṣirá-s*, strong, lively, quick:
gr. ἰερός.

Further also:

idg. **tamə-ró-s*: skr. *timirá-s*, dark: *tāmas*, darkness.

idg. **ghən-*: skr. *hināsmi*, *himsūmi*, I hurt: *hānmi*, I slay.

Other instances of idg. *ə*, skr. *i*:

idg. **pətē(r)*: skr. *pitā*, father, gr. πατήρ, lat. *pater*, goth. *fadar*.

idg. **stható-s*: skr. *sthitá-s*, standing, gr. *στατός*.

idg. **é-dato*: skr. *ádita*, 3 pers. sing. aor. med. of *dádāmi*,
cf. gr. *ἔδοτο* (idg. *ə* in *δάνος*).

De Saussure 150 thinks, that *ə*, when followed by *i* or *u*, is represented in Indian by *a*, but the inaccuracy of this opinion is clearly shown by Bechtel 250 sqq. This scholar supposes, that *ə* fell together with *a*, if it had got the stress before the Aryan change of *ə* to *i*.

Instances of such *a*'s are:

skr. *rátna-m*, riches, treasure (ved.), jewel, pearl: *rātí-ṣ*, gracious, grace, gift, *rā-s* (*rāy-*), wealth, lat. *rēs*.

ved. *dátra-m*, gift: *dāna-m*, *dádāmi*, gr. *δῶρον*, *δίδωμι*, lat. *dōnum*, *dōs*.

skr. *kṣatrá-m*, rule, dominion (ved.), nobility: gr. *κτῆμα*.

skr. *ni-dhána-m*, end, death, *dhána-m*, prize of the contest, booty (ved.), wealth, property, money: *dádāhāmi*, I put, gr. *τίθημι*.

Before *y*:

skr. *dáyate*, parts, allots, takes part, sympathizes, *dayá*, sympathy, compassion, gr. *δαίωμα*.

skr. *dháyati*, sucks, drinks: ved. *dhāyáse*, to suck, to nourish.

skr. *páyas*, sap, liquid (ved.), water, milk: *pātum*, to drink.

skr. *váyati*, weaves, *vayá*, twig (ved.): *vāna-m*, subst. weaving.

skr. *vyáyati*, envelops: *-vyāna-*, subst. enveloping.

skr. *hváyati*, calls: *hvātum*, to call.

Bechtel's theory is not improbable, but there are some objections to be made:

1° *kṣatrá-* is oxytonon: so it does not agree with Bechtel's rule.

2° in not a single of the above-mentioned words it is certain, that we have to do with idg. *ə*. If *rátna-m* really belongs

to the same root as *rātí-ṣ*, *rā́-s*, lat. *rēs*, which however seems to be **rēi-*, than it might be reduced as well to **retno-m* as to **ratno-m*, for *e* is also a weak form of *ē* (cf. *θετός* : *τίθημι*). So *dhána-m* may be an idg. **dhenó-m*, *dátra-m* an idg. **dotro-m* (cf. *δοτός* : *δίδωμι*) &c.

In *stendá-*, thief, *sénā*, army, &c. we have idg. *ai* (resp. *ei* or *oi*), for *ai* was contracted to *i* before the end of the Indogermanic period.

The combinations of *a* with nasals and liquids (which existed in Indogermanic by the side of the sonant nasals and liquids), require a separate treatment.

In the combinations *am*, *an* the idg. *a* is regularly represented by *i*:

idg. **samó-s*: ved. *simá-s*, each, cf. *sama-s*, each, somebody (**smmó-s*).

idg. **tamaró-s*: skr. *timirá-s*, dark, cf. *támas*, darkness.

idg. **bamb-*: skr. *bimba-m*, *bimba-s*, disk, cf. gr. *βέμβιξ*.

idg. **ghen-*: skr. *hinásmi*, *himsāmi*, I hurt, cf. *hānmi*, I slay.

I assume the combinations *ar*, *al* in those cases, where others have supposed long sonant liquids. They remained unchanged during the Aryan period; in Iranian they became *ar*. In Sanskrit they were treated in a different way, according as they stood or stood not in the neighbourhood of a labial consonant or vowel.

If they were not preceded or followed by a labial, the idg. *ar*, *al* became *ir* (*il*) before vowels, *ir* before consonants. In the immediate neighbourhood of labials we find *ur* (*ul*) before vowels, *ūr* before consonants.

Idg. *ar*, *al* before vowels, not in the neighbourhood of labials, skr. *ir*:

idg. **garí-s*: skr. *girí-s*, mountain, cf. lith. *giria*, forest, oslav. *gora*, mountain.

idg. **garō*: skr. *girámi*, I devour, cf. oslav. *žřq*, I devour, gr. *βάραθρον*, *δέρεθρον*.

idg. **galés*: skr. *girás*, gen. abl. sing. of *gír*, voice, cf. oslav. *glasü*, voice, icel. *kalla*, to call (idg. **gals*-) &c. There are also forms with *r* (lith. *garsas*, lat. *garriō*; gr. *γῆρυς*) and so it is possible, that the original form of *girás* is **garés*.

idg. **kārō*: skr. *kirámi*, I pour out, I strew.

idg. **tārō*: ved. *tirámi*, cf. idg. **térō*, skr. *tárāmi*, I cross, and gr. *τείρω*, *τέρετρον*.

idg. **tārns*: ved. *tirás*, through, cf. lat. *trans*.

Idg. *ər*, *əl* before consonants, not in the neighbourhood of labials, skr. *īr*:

idg. **kārs-*: ved. *çirṣán-*, skr. *çirṣá-m*, head, cf. gr. *κόρση*, *κόρρη* and skr. *çíras* (idg. **kāros*), head, gr. *κάρα*, *κάρη* (**kārā*).

idg. **dəlghó-s*: skr. *dīrghá-s*, long, cf. gr. *δολιχός*, *ένδελεχής*, lat. *indulgeō*.

idg. **gal-s* (perhaps **gar-s*): skr. *gír*, voice.

Further a great number of passive participles as *gīrṇá-*: *girámi*, *kīrṇá-*: *kirámi* &c. It is a matter of course, that skr. *jīrṇá-*, worn out, old, must not be identified with lat. *grānum* (idg. **grāno-*). The *ūr* of ved. *juráti*, *jūryati*, decays, grows frail, and other verbs, where no labial is found, is not yet explained: probably these words are loans from a dialect, where *ər* became *ur* (*ūr*) in every condition or they have taken their *u* from other verbs, in which *u* was developed according to the rule (*sphuráti*).

On the other hand we should expect *ūr* instead of *īr* in ved. *irmá-s*, arm, which with lat. *armus*, goth. *arms* goes back on idg. **ərmó-s* (*m* is a labial!).

Idg. *ər*, *əl* before vowels, in the neighbourhood of labials, skr. *ur*:

idg. **uəren-*: ved. *úraṇa-s*, ram, lamb, cf. gr. *ἄρνός*, gen. of **ἄρην*.

idg. **pəlú-s*: skr. *purú-*, much, gr. *πολύς* (**παλός*), cf. goth. *filu*.

idg. **sphərō*: skr. *sphurāmi*, I make a quick motion, I dart, I twitch, cf. gr. *σπαίρω* &c.

idg. **gərú-s*: skr. *gurú-s*, heavy, important, worthy of honor, cf. gr. *βαρύς*, goth. *kaúrus* and also lat. *gravis*.

Idg. *ər*, *el* before consonants, in the neighbourhood of labials, skr. *ūr*:

idg. **uərdhūó-s*: skr. *ūrdhvá-s*, high, tending upwards, gr. dor. *βορθό-* (**φαρθφό-*), cf. gr. *ὀρθός*, lat. *arduus* (without *u* in the anlaut, idg. **ərdhūó-s*).

idg. **uəlmí-s*: skr. *ūrmí-s*, wave, ags. *wielm*, *wylm*, ohg. *walm*.

idg. **uəlná*: skr. *ūrṇā*, wool, cf. goth. *wulla* (but lat. *lāna* = gr. *λάχνη*).

idg. **pəruo-s*: skr. *pūrva-s*, first, cf. oslav. *prüvŭ* (i. e. *prĭvŭ*) and with *m* goth. *fruma*.

idg. **pəlnó-s*: skr. *pūrṇá-s*, full, cf. goth. *fulls*. Lat. *plēnus* has idg. *ē* and corresponds to ved. *prāṇa-*.

idg. **pəl-s*: skr. *pūr*, stronghold, fortified town, cf. gr. *πόλις*.

idg. **məldhen-*: skr. *mūrdhā* (*n*), head, cf. ags. *molda*.

idg. **bhərgo-s*: skr. *bhūrja-s* birch, cf. ohg. *pirihha*.

idg. **dəruā*: skr. *dūrṇā*, millet-grass, dutch *tarwe*, wheat.

§ 14. Idg. *i*. Idg. *i* = skr. *i*.

idg. **imés*, **imén*: skr. *imás*, we go, gr. *ἴμεν*.

idg. **bhibhéimi*: skr. *bibhēmi*, I am afraid, ohg. *bibēm*.

idg. **diuí*: skr. *diví*, in heaven, gr. *Δί*.

idg. **i-d*: skr. *i-d-ám*, this, lat. *id*, goth. *it-a*.

idg. **uidmé*, **uidmén*: skr. *vidmá*, we know, gr. ἴδμεν, ἴσμεν, goth. *witum*.

idg. **óui-s*: skr. *áviṣ*, sheep, gr. ὄϊς, οἶς, lat. *ovis*, goth. *awi-*.

idg. **suādistho-s*: skr. *svādīṣṭha-s*, sweetest, gr. ἡδιστος (**ἄδιστος*).

idg. **ésmi*: skr. *ásmi*, I am, gr. εἰμί, lesb. ἔμμι (**ἔσμι*), goth. *im*.

idg. **esti*: skr. *ásti*, is, gr. ἔστι, lat. *est*, goth. *ist*.

idg. **idhi*: skr. *ihí* (**idhí*), go, gr. ἴθι.

§ 15. Idg. *ī*. Idg. *ī* = skr. *ī*.

idg. **giuó-s*: skr. *jīvā-s*, living, lat. *vivus*, cf. gr. βίος, goth. *gius* (idg. **giuo-s*).

idg. **grīuā*: skr. *grīvā*, neck, oslav. *griva*, mane.

idg. **pīuēn-*: skr. *pīvā* (*n*), fat, gr. πῖον.

idg. **pī-*, weakest form of **pōi-*, to drink (not to confound with **pōi-*, to protect): skr. *pītā-s*, drunk, gr. πίνω, πῖθι, cf. skr. *pātum*, to drink, perf. *papāu*, gr. πέπωκα, &c.

idg. **sīmén-* (root **sī-*, **sai-*, **sāi-*): skr. *sīmā* (*n*), crown, border, frontier, limit, cf. gr. ἱμάς.

idg. **uiró-s*: skr. *vīrā-s*, man, hero, cf. lat. *vir*, goth. *waír* and gr. ἴς, ἱφί, lat. *vis*. A stronger form of the root is contained in skr. *váyas*, strength, health, youth, age.

§ 16. Idg. *u*. Idg. *u* = skr. *u*:

Idg. **dhugatē(r)*: skr. *duhitā* (*r*), daughter, cf. gr. θυγάτηρ and goth. *daúhtar*, lith. *duktė*.

idg. **jugó-m*: skr. *yugá-m*, yoke, generation, an age of the world, gr. ζυγόν, lat. *jugum*, goth. *juk*.

idg. **kúnós*: skr. *śúnas*, gr. κυνός, gen. of skr. *śvā*, dog, gr. κύων.

idg. **klutó-s*: skr. *śrutā-s*, heard, heard of, famed, gr. κλυτός, lat. *in-clutus* (cf. with *ū* ags. *hlúd*).

idg. **rudhāró-s*: skr. *rudhirá-s*, red, cf. gr. ἑρυθρός (idg. **erudhró-s*), lat. *ruber*. The root **reudh-*, **ereudh-* is a secondary formation from **ereu*, cf. skr. *aruṇá-s* and *aruṣá-s*, ruddy.

idg. **syādú-s*: skr. *svādú-ṣ*, sweet, gr. ἡδύς.

idg. **nu*: skr. *nú*, now, gr. νύ, goth. *nu*.

I do not accept the theory, according to which idg. *ru* became *r*, when there was an *u* in the following syllable: *çṛṇóti*, hears, goes back on **k̑_l-ne-u-ti* (root **k̑_leu-*, cf. de Saussure 244, Pedersen, Idg. forschungen 2, 307).

§ 17. Idg. *ū*. Idg. *ū* = skr. *ū*:

idg. **bhūtí-s* (root **bhū-*, **bheue-*, **bheue-*): skr. *bhūtí-ṣ*, being, prosperity, cf. gr. Φύσις.

idg. **dhūmó-s*: skr. *dhūmá-s*, smoke, vapor, gr. θῦμός, lat. *fūmus*.

idg. **k̑ūro-s*: skr. *çāra-s*, mighty, bold, hero, gr. -κῦρος in ἄ-κῦρος, not valid, cf. τὸ κῦρος, κῦριος.

idg. **mūs*: ved. *māṣ-*, mouse, gr. μῦς, lat. *mūs*, ohg. *mūs*.

idg. **nū*: ved. *nā*, now, gr. νῦν.

§ 18. Idg. *ṃ*. The idg. *ṃ* became *a* during the Aryan period; so it fell together with *ṇ* (see § 19), *a* (see § 7), *e* (see § 9) and *o* (see § 11):

idg. **gṃskhėti*: skr. *gácchati*, goes, cf. gr. imperat. βάσκε. The root is **gem-*.

idg. **gṃtó-s*: skr. *gatá-s*, gone, gr. βατός, lat. *-ventus* and idg. **gṃti-s*: skr. *gáti-ṣ*, going, issue, refuge, gr. βάσις, goth. *-qumpi-* (root **gem-*).

idg. **k̑mtó-m*: skr. *çatá-m*, hundred, gr. ἑκατόν, lat. *centum*, goth. *hund*. That we have to do with *ṃ*, appears from lith. *szimtas*.

idg. **dékṃ*: skr. *dāça*, gr. δέκα, lat. *decem*, goth. *taihun*. Notice the *m* of lith. *deszimt*.

Before *i*, *u* and before vowels we find *ym*:

idg. **gymīēt*: ved. *gamyāt* must go (root **gem-*).

idg. **ge gymuōs*: ved. *jaganvān* (*ins*), with *nv* from *mv* (see § 37), part. perf. act. from **gem-*, to go.

idg. **symó-s*: ved. *sama-s*, somebody, gr. *ἄμó-*, goth. *sums*, cf. **səmə-s*, ved. *simá-s* each (this word has been explained differently by Geldner, Ved. studien 2, 188 sqq.).

idg. **summer-*: skr. *sāmā* (*ā*-stem), half a year, year, ags. *sumor*, engl. *summer*.

§ 19. **Idg. *ŋ*.** The dental, guttural and palatal *ŋ* are represented in Aryan by *a*. They have fallen together with *ŋ* (see § 18), *a* (see § 7), *e* (see § 9) and *o* (see § 11).

Instances of the dental *ŋ*:

idg. **ŋ-mṛto-s*: skr. *amṛta-*, immortal, gr. *ἄμβροτος*.

idg. **mṛtó-s*: skr. *matá-s*, thought, gr. *-ματος* in *αὐτόματος*, lat. *-mentus*, goth. *munds*.

idg. **néŋ*: skr. *náva*, cf. gr. *ἐννέα*. Lat. *novem* has borrowed its *m* from *decem*, but goth. *niun* is entirely identical with skr. *náva*. Lith. *devyni* proves, that the original form had *ŋ* (not *ŋ*).

Before *i*, *u* and before vowels we find *yn*:

idg. **mynīetai*: skr. *mányate*, thinks, gr. *μάλινεται*.

idg. **ghe ghynuōs*: skr. *jaghanvān* (*ins*), part. perf. act. from **ghen-*, to slay.

idg. **tynyí*: skr. *tanvī*, fem. of *tanú-s*, thin, cf. gr. *τανυ-*, lat. *tenuis*, obg. *dunni*.

idg. **yn-udro-s*: ved. *anudrá-*, waterless, gr. *ἄνυδρος*.

idg. **tynú-s*: skr. *tanú-s*, thin, see above.

Skr. *sánti*, they are, is not idg. **sṇti*, but **sénti* (Streitberg, Idg. forschungen 1, 82 sqq.).

An instance of the guttural *ŋ* is:

idg. **l_hghú-s*: skr. *laghú-s*, light, swift, insignificant, gr. *ἐλαχύς* (**el_hghú-s*), cf. *ἐλαφρός* (**el_hghrós*) and goth. *leihts*. Lat. *levis* seems never to have contained a nasal.

Of the palatal *ṇ*:

idg. **d_hkéti*: skr. *dácati*, bites, cf. gr. *δάκνω*, *ἔδακον*.

§ 20. **The problem of the long sonant nasals.** De Saussure 239 sqq., Brugmann 1, 208 sq. and others attribute long sonant nasals to the mother-language. In the same way they assume idg. *ṛ*, *ḷ*, which I have replaced by *ər*, *əl* (see § 13). These are represented in Sanskrit by *ir*, *il* (*ur*; *īr*, *ūr*) and stand on a level with idg. *əm*, *ən*, skr. *im*, *in*. Brugmann thinks, that those hypothetical *ṝ*, *ḹ* became *ā* in Aryan. but the cases, in which such *ā*'s are supposed, admit other explications, which seem more acceptable.

The aorist-forms skr. *ágām*, *ágūs*, *ágāt* &c.. which doubtlessly are identical with gr. *ἔβην*, *ἔβης*, *ἔβη*, dor. *ἔβᾶν*, *ἔβᾶς*, *ἔβᾶ*, are not derived from the root **gem-*, but from its synonyme **gā-* (see Persson, Studien zur lehre der wurzelerweiterung und wurzelvariation, Upsala 1891, 70). The *ā* of skr. *ágām*, gr. dor. *ἔβᾶν* is an idg. *ā* (not *ṝ*) and the original paradigm was **é_gām*, **é_gūs*, **é_gāt* &c. In a similar way are to be explained *sātá-*: *sanómi*, *vātá-*: *vanómi*, *ghāta-* (and *ghāti-*): *hánmi* and some other cases. But *jātá-*, born, seems to have taken its *j* instead of *jñ* by the influence of *jānati*, *janáyati*, *jajāna* &c. The regular form **jñāta-* (idg. **gnātó-*) corresponds to lat. *-gnātus*, gall. *-gnātus*.

The *j* of the praesens *jáyate* has the same origin as that of *jātá-* (*táyate*: *tanóti*, *khāyate*: *khánati* have been formed after the type of *jáyate*). The substitution of *j* for *jñ* in *jātá-*, *jáyate* is Indo-Iranian, cf. pers. *zād*, birth, *zādan*, to bear, to be born. In skr. *jānāmi*, I know (= pers. *dānam*) we may

explain the *j* instead of *jñ* by dissimilation (**jñānāmi*), cf. gr. γιγνώσκω, lat. -gnōscō.

If ved. *ātí-s*, a waterbird, is to be compared with gr. νῆσσα, the following explanation seems possible: there was an -i- (-ei-, -oi-) stem **nāti-*, **ntéi-* in the mother-language, which in Aryan became regularly **nāti-*, **atái-*. Ved. *ātí-* is a contamination of **nāti-* and **atái-*. Lat. *anas*, ohg. *anut*, lith. *antis*, oslav. *qty* are not clear (idg. **anat-*, **ant-*?). But perhaps it is preferable to separate *ātí-* from νῆσσα (**nātiā*) and to identify it with gr. ὠτίς (-ίδος), as has been proposed by Speyer (Museum 2, 435).

Unexplained are ved. *āta-*, *ātā*, frame of a door: lat. *anta*; ved. *yātar-*, the wife of the husband's brother: gr. εἰνατέρεις: lat. *janitrices* &c. Von Bradke (Idg. forschungen 4, 87 sqq.) compares skr. *jārā-*, lover, paramour, with *jāmātar-*, son in law, gr. γαμβρός, which combination from a semantic point of view would not seem very probable. Less credible yet is his etymology of skr. *dārā-*, wife (: gr. δάμαρ, 85 sqq.), for Johansson (Idg. forschungen 3, 229 sqq.) has shown its identity with gr. δῶλος (: δούλος).

§ 21. Idg. *r*, *l*. The idg. *r* and *l* are represented by *r*. Skr. *klptá-*, put in order, arranged, the only word that contains *l*, is a prācritism for **krptá-* (the etymology of *kalp-* is to be found in my Etym. wörterbuch der gotischen sprache, Amsterdam 1896, s. v. *halbs*).

Idg. *r* = skr. *r*:

idg. **ṛkpo-s*: skr. *ṛkṣa-s*, bear, gr. ἄρκτος, lat. *ursus*.

idg. **ṛnéumi*, **ṛnumaḥ*: ved. *ṛnómi*, I rise, I go, I attain, gr. ῥνῦμι (see Schmidt, Kuhn's Zeitschr. 32, 376 sqq.), ἄρνυμαι.

idg. **ṛsen-*: skr. *ṛṣa-bhá-s*, bull, gr. ἄρσην, ἄρρην.

idg. **dhṛsnéumi*: skr. *dhṛṣṇómi*, I dare, cf. gr. *θρασύς*, *θαρρέω*, goth. *gadaúr-san*.

idg. **kṛp-*: ved. *kṛp-*, appearance, form, shape, lat. *corpus*.

idg. *mṛṇámi*, **mṛṇamāi*: ved. *mṛṇámi*, I crush, gr. *μάρναμαι*.

idg. **mṛtós*: skr. *mṛtá-s*, dead, ohg. *mord*, cf. skr. *mṛtyú-ṣ*, *mṛti-ṣ*, death, lat. *mors* and skr. *mriyáte*, dies, lat. *morior*.

idg. **pr̥k̥skhéti*: skr. *pr̥cchāti*, asks, lat. *poscit*, cf. ohg. *forscōn*.

ldg. *ḷ* = skr. *ṛ*:

idg. **pl̥thús*: skr. *pr̥thú-ṣ*, wide, broad, gr. *πλατύς*, cf. lith. *platus*. The original forms of the stem were **plóthu-* (**plótu-*) and **pl̥théu-* (**pl̥téu-*).

idg. **ul̥qo-s*: skr. *vṛka-s*, wolf, goth. *wulfs*, cf. idg. **líqo-s*, gr. *λύκος*.

idg. **l̥k̥io-s*: skr. *ṛṣya-s*, the male of an antelope, cf. ags. *eolh*, ohg. *elaho* and icel. *elgr*, lat. *alces*, russ. *losi* (also lith. *elnis*, oslav. *jeleni*, armen. *eln*).

About skr. *mriyáte*, dies, *kriyáte*, is being made, see Brugmann 1, 113. 233. About skr. *ir*, *īr*, *ur*, *ūr* see § 13.

B. THE RELATION OF THE INDIAN VOWELS TO THE INDOGERMANIC.

§ 22. **The Indian vowels in general.** The Indian vocalism is distinguished from the Indogermanic by a far greater simplicity. Already in the Aryan period *ə* in general was changed to *i* and *e*, *o*, *ṃ*, *ṇ* had fallen together with *a*, according to which *ē*, *ō*, *ā* were represented only by *ā*. Afterwards, during the separate life of Indian, *aḥ* (idg. *aḥ*, *eḥ*, *oḥ*) and *au* (idg. *au*, *eu*, *ou*) were contracted to *e* and *o*.

Hence it follows, that the \bar{a} -, \bar{e} - and \bar{o} -series had fallen together (weak: —, i , a . strong: \bar{a}). So there are in Indian but two vowel-series:

I. a -series (idg. e -series).

| Weak: | Strong: | Lengthened: |
|--|----------------|----------------------------|
| A. — , i . | a . | \bar{a} . |
| B. y (i), \bar{i} . | e (ya). | $\bar{a}i$ ($y\bar{a}$). |
| C. v (u), \bar{u} . | o (va). | $\bar{a}u$ ($v\bar{a}$). |
| D. m (a , am), im . | am (ma). | $\bar{a}m$ ($m\bar{a}$). |
| E. n (a , an), in . | an (na). | $\bar{a}n$ ($n\bar{a}$). |
| F. r (r), \check{r} (\check{r}). | ar (ra). | $\bar{a}r$ ($r\bar{a}$). |
| G. l (r), \check{r} (\check{r}). | al (la). | $\bar{a}l$ ($l\bar{a}$). |

II. \bar{a} -series (idg. \bar{e} -, \bar{a} -, \bar{o} -series).

| Weak: | Strong: |
|---|----------------------------|
| A. — , i , a . | \bar{a} . |
| B. y (i), \bar{i} , e (ya). | $\bar{a}i$ ($y\bar{a}$). |
| C. v (u), \bar{u} , o (va). | $\bar{a}u$ ($v\bar{a}$). |

According to the ancient Indian grammarians there was but one vowel-series. They considered i , u , r (l) as primitive vowels, which could be strengthened by a prefixed a -element. This strengthening was called *guṇa*. A second strengthening was produced by the further prefixion of a to the *guṇa*-vowel: the name of this increment was *vṛddhi*. It is to be noticed, that a is its own *guṇa*: \bar{a} is the corresponding *vṛddhi*.

So their vowel-system is as follows:

| | | | | |
|----------------|-----------|-------------------|-------------------|--------------------|
| Simple vowels: | (a) | i (\bar{i}) | u (\bar{u}) | r (\bar{r}). |
| Guṇa-vowels: | a | e | o | ar . |
| Vṛddhi-vowels: | \bar{a} | $\bar{a}i$ | $\bar{a}u$ | $\bar{a}r$. |

The older European linguists adopted this system, but the researches of the last thirty years have shown its inaccuracy (cf. § 6). It is to be observed, that the lengthened degree (*ā, āi, āu, ām, ān, ār, āl*) has extended its original dominion by the vṛddhation of vowels in secondary derivatives (see von Bradke, Zeitschr. d. D. Morgenl. Ges. 40, 361 sqq.). The commencement of this secondary vṛddhation dates back to the Indogermanic period (see Bechtel 175; Streitberg, Idg. forschungen 3, 379 sqq.; also my remarks on the mutual relation of goth. *hana*: **hōn*, P. B. Beitr. 22, 189 sq., 545 sqq.).

I. *a*-series (idg. *e*-series).

idg. **pet-*, to fly, to fall.

Weak: ved. 1 pers. sing. aor. act. *ápaptam*, 3 pers. plur. perf. act. *paptúr*. Strong: skr. 1 pers. sing. praes. act. *pátāmi*, ved. 1 pers. sing. ind. iterat. act. *patáyāmi*. Lengthened: ved. 3 pers. sing. aor. pass. *ápāti*, skr. 1 pers. sing. praes. causat. act. *pātáyāmi*.

idg. **bheid-*, to split.

Weak: skr. part. perf. pass. *bhinná-s*, 3 pers. sing. praes. pass. *bhidýāte*; ved. *vibhídaka-s*, Terminalia Bellerica (the younger form *vibhítaka-* seems to be a loan from the Pāṭṣāci-dialect). Strong: skr. 1 pers. sing. fut. act. *bhetsyāmi*, 1 pers. 3 pers. sing. perf. act. *bibhédā*. Lengthened: skr. 3 pers. sing. aor. act. *ábhātsit*.

idg. **bheudh-*, to perceive.

Weak: skr. part. perf. pass. *buddhá-s*, 3 pers. sing. praes. pass. *budhyāte*. Strong: skr. 1 pers. sing. praes. act. *bódhāmi*, 1 pers. 3 pers. sing. perf. act. *bubódha*. Lengthened: skr. 3 pers. sing. aor. act. **ábhāutsit*.

idg. **gem-*, to go.

Weak: skr. 3 pers. plur. perf. act. *jagmúr*; part. perf. pass. *gatá-s*, 1 pers. sing. praes. act. *gáčchāmi* (**gacchāmi*), ved. 1 pers. sing. praes. act. *gámāmi* (**gamāmi*). Strong: skr. 1 pers. sing. fut. act. *gamīṣyāmi*, 2 pers. sing. perf. act. *jagántha*. Lengthened: skr. 1 pers. 3 pers. sing. perf. act. *jagáma*, ved. 1 pers. sing. praes. causat. act. *gāmáyāmi*.

idg. **tem-*, to be dark.

Weak: skr. *timirá-s*, dark. Strong: skr. *támas*, darkness. Lengthened: skr. *tāmrá-s*, dark-red.

idg. **men-*, to think.

Weak: ved. 2 pers. dual. perf. med. *manṇátthe*; skr. part. perf. pass. *matá-s*, 3 pers. sing. praes. med. *mányate*. Strong: skr. 3 pers. sing. fut. med. *maṁsyáte*. Lengthened: skr. 1 pers. sing. praes. causat. act. *mānáyāmi*.

idg. **bhendh-*, to bind.

Weak: skr. part. perf. pass. *baddhá-s*, 1 pers. sing. praes. act. *badhnāmi*. Strong: skr. 1 pers. sing. fut. act. *bandhiṣyāmi*, 1 pers. 3 pers. sing. perf. act. *babándha*. Lengthened: skr. 3 pers. sing. aor. act. *ábhāntsīt*.

idg. **ter-*, to cross.

Weak: ved. part. praes. act. *títrat-*; 1 pers. sing. praes. act. *tirámi*, skr. part. perf. pass. *tirṇá-s*. Strong: skr. 1 pers. sing. praes. act. *tárāmi*, 1 pers. sing. perf. act. *tatára*. Lengthened: skr. 3 pers. sing. aor. act. *átārṣīt*, 1 pers. 3 pers. sing. perf. act. *tatára*.

idg. **bher-*, to bear.

Weak: skr. 1 pers. 3 pers. sing. perf. med. *babhré*; part. perf. pass. *bhrtá-s*; 1 pers. sing. praes. desiderat. act. *búbhūrṣāmi*. Strong: skr. 1 pers. sing. praes. act. *bhárāmi*, *bíbharmi* (*bibhármi*, Rv.), 2 pers. sing. perf. act. *babhártha*. Lengthened: ved. 3 pers. sing. aor. act. *ábhārṣīt*, skr. 1 pers. 3 pers. sing. perf. act. *babhára*.

II. *ā*-series (idg. *ē*-, *ā*-, *ō*-series).

idg. **dhē*-, to put.

Weak: skr. 3 pers. sing. praes. med. *dhatté*; ved. part. perf. pass. -*dhita-s*; skr. *dhána-m*, prize of the contest, booty (ved.), wealth, money. Strong: skr. 1 pers. sing. praes act. *dádāmi*, 1 pers. 3 pers. sing. perf. act. *dadhāu*.

idg. **sthā*-, to stand.

Weak: skr. 1 pers. 3 pers. sing. perf. med. *tasthé*; part. perf. pass. *sthitá-s*. Strong: skr. 1 pers. sing. praes. act. *tíṣṭhāmi*, 1 pers. 3 pers. sing. perf. act. *tasthāu*.

idg. **dō*-, to give.

Weak: skr. 3 pers. sing. praes. med. *dátte*; ved. part. perf. pass. -*dita-s*. Strong: skr. 1 pers. sing. praes. act. *dádāmi*, 1 pers. 3 pers. sing. perf. act. *dadāu*.

idg. **nāḡ*- (**nēḡ*? **nōḡ*?), to lead.

Weak: skr. 1 pers. 3 pers. sing. perf. med. *ninyé*; ved. 1 pers. plur. perf. act. *nīnimá*; skr. part. perf. pass. *nītá-s*; 1 pers. sing. praes. act. *náyāmi*, 1 pers. sing. fut. act. *neṣyāmi*. Strong: skr. 1 pers. sing. praes. causat. act. *nāyáyāmi*.

idg. **dāu*-, to burn.

Weak: skr. 1 pers. sing. praes. act. *dunómi*; part. perf. pass. *dūná-s*; *dava-s*, fire, burning. Strong: skr. 1 pers. sing. praes. causat. act. *dāváyāmi*.

The Indogermanic mother-language had also dissyllabic roots, a great part of which contained the combinations *eḡe*, *eḡe*, *eme*, *ene*, *ere*, *ele*. In Indian these *udātta*-roots are found only in a weaker form, with *ayi*, *avi*, *ami*, *ani*, *ari*, *ali*, i. e. idg. *eḡa*, *eḡa*, *ema*, *ena*, *era*, *ela*. Such roots, which make part of the idg. *e*-series, are not easily to distinguish from the idg. *ē*-, *ā*- and *ō*-roots. Here it will be sufficient to refer to de Saussure 239 sqq.; Brugmann 1, 104 sqq.; Kretschmer, Kuhn's

Zeitschr. 31, 386 sq.; Bartholomae, Bezz. Beitr. 17, 109 sqq.;
Hirt, Idg. forschungen 7, 185 sqq.

§ 23. **Skr. a.** In skr. *a* have fallen together the idg. vowels
a, e, o, ʷ, ʁ.

Skr. *a* = idg. *a*:

skr. *ájāmi*, I drive, gr. ἄγω, lat. *agō*, icel. inf. *aka*.

ved. *ájra-s*, field, gr. ἄγρός, lat. *ager*, goth. *akrs*.

skr. *skándāmi*, I spring, lat. *scandō*.

skr. *ám̐ba*, vocat. of *ambā*, mother, cf. gr. vocatives as
νύμφα, δέσποτα.

Skr. *a* = idg. *e*:

skr. *ásti*, is, gr. ἔστι, lat. *est*, goth. *ist*.

skr. *ábharam*, I bore, gr. ἔφερον.

ved. *jánas*, family, race, gr. γένος, lat. *genus*.

ved. *háras*, heat, gr. θέρος.

skr. *pāñca*, five, gr. πέντε, lat. *quinque*, goth. *fimf*.

skr. *bháratha*, you bear, *ábharata*, you bore, gr. Φέρετε,
ἐΦέρετε, goth. *baíriþ*.

Skr. *a* = idg. *o*:

ved. *ápas*, work, lat. *opus*.

skr. *ást̐hi*, bone, gr. ὀστέον, lat. *os*.

skr. *dadár̐ca*, has seen, gr. δέδορκε.

skr. *kakṣā*, region of the girth, girdle, cincture, lat. *coxa*,
mhg. *hahse*.

skr. *práti*, against, gr. πρός.

skr. *vṛka-s*, wolf, gr. λύκος, goth. *wulfs*.

Skr. *a* = idg. *ʷ*.

skr. *gatá-s*, gone, gr. βατός, lat. *-ventus*.

skr. *ṣatá-m*, hundred, gr. ἑκατόν, lat. *centum*, goth. *hund*.

skr. *ratá-s*, ceased, content, gr. ἐρατός, cf. skr. *rám̐ate*, stops, ceases, rests, finds pleasure in something, gr. ἔραμαι, ἡρέμα, goth. *rimis*.

skr. *sámā*, half a year, year, ags. *sumor*.

Skr. *a* = idg. *u*:

skr. *amṛta-s*, immortal, gr. ἄμβροτος.

skr. *matá-s*, thought, gr. -ματος, lat. -mentus, goth. *munds*.

ved. *anudrá-s*, waterless, gr. ἄνυδρος.

skr. *jaghána-m*, the hinder parts, the buttocks, gr. κοχώνη (*καχώνη), cf. skr. *jāṅghā*, lower half of the leg, and goth. *gaggan*. The first *a* in *jaghána-m* represents the idg. guttural *u*.

skr. *bahú-ṣ*, abundant, much, gr. παχύς, cf. skr. comp. *bámhīyān* (ins). The *a* of *bahú-ṣ* goes back on idg. palatal *u*.

Perhaps skr. *a* = idg. *ə*: see § 13.

§ 24. Skr. *ā*. By skr. *ā* are represented the idg. *ā*, *ē*, *ō*.

Skr. *ā* = idg. *ā*:

skr. *bāhú-ṣ*, arm, gr. πῆχυς, dor. πᾶχυς, ohg. *buog*.

skr. *mātā*, mother, gr. μήτηρ, dor. μᾶτηρ, lat. *māter*, ohg. *muoter*.

skr. *tīṣṭhāmi*, I stand, gr. ἵστημι, dor. ἵστᾱμι, lat. *stāre*, cf. skr. *ásthāt*, stood, gr. ἕστη, dor. ἕστᾱ.

skr. *áçvā*, mare, lat. *equa*.

Skr. *ā* = idg. *ē*:

skr. *ādivān*, having eaten, gr. ἔδηδώς.

skr. *-jāni-*, wife, goth. *qēns*.

skr. *vāti*, blows, gr. ἄησι, goth. *waian*.

skr. *durmanās*, dejected, gr. δυσμενής.

Skr. *ā* = idg. *ō*:

skr. *āçú-ṣ*, swift, gr. ὠκύς, lat. comp. *ōcior*.

skr. *āmá-s*, raw, gr. ὠμός.

skr. *dāna-m*, gift, lat. *dōnum*.

ved. *bhāratād*, must bear, gr. Φερέτω, cf. lat. *fertō*.

§ 25. Skr. *i*. Skr. *i* goes back on idg. *i* and *ə*.

Skr. *i* = idg. *i*:

skr. *imás*, we go, gr. ἴμεν.

skr. *diví*, in heaven, gr. Δί.

skr. *ávi-s*, sheep, gr. ὄϊς, οἶς, lat. *ovis*, goth. *awi*.

skr. *ásti*, is, gr. ἔστι, lat. *est*, goth. *ist*.

Skr. *i* = idg. *a*.

skr. *pitá*, father, gr. πατήρ, lat. *pater*, goth. *fadar*.

skr. *sthitá-s*, standing, gr. στατός.

skr. *timirá-s*, dark: *támas*, darkness, cf. also *támisrā*, darkness, dark night, lat. *tenebrae*, middle-dutch *deemster*.

skr. *girí-s*, mountain, cf. lith. *giria*, forest (with idg. *ḡ*) and oslav. *gora*, mountain (with idg. *a*, *a* or *o*).

§ 26. **Skr. ī.** In general the skr. *ī* corresponds to the idg. *ī*, but before *r* + cons. it nearly always goes back on *a*.

Skr. *ī* = idg. *ī*:

skr. *jivá-s*, living, lat. *vīvus*.

skr. *pīvā* (*n*), fat, gr. πῖον.

skr. *sīmā* (*n*), crown, border, frontier, gr. ἱμάς (*ντ*).

Skr. *īr* before consonants = idg. *ar*, *al*:

ved. *īrmá-s*, arm, lat. *armus*, goth. *arms*.

skr. *dirghá-s*, long, cf. gr. δολιχός, ἐνδελεχής.

In cases as skr. *lidhá-s*, licked, *nīdā-s*, nest, *ī* is lengthened from *i* (see § 61 and § 63).

§ 27. **Skr. u.** In general the skr. *u* corresponds to the idg. *u*, but before *r* + vowel it often represents the idg. *a*.

Skr. *u* = idg. *u*:

skr. *urú-s*, wide, cf. gr. εὐρύς (idg. *έγρυ-, *uréu-).

skr. *yugá-m*, yoke, age, gr. ζυγόν, lat. *jugum*, goth. *juk*.

skr. *grutá-s*, heard, heard of, gr. κλυτός.

skr. *nú*, now, gr. νύ, goth. *nu*.

Skr. *ur* before vowels (in the neighbourhood of labial sounds) = idg. *ar*, *al*:

skr. *purú-*, much, gr. *πολύς* (**παλύς*), cf. goth. *filu*.

skr. *gurú-*ṣ, heavy, important, worthy of honor, cf. gr. *βαρύς*, goth. *kaúrus*.

In ved. *úraṇa-s*, ram, lamb, *ur* goes back on idg. *u̯ar*.

§ 28. **Skr. ū.** In general the skr. *ū* corresponds to the idg. *ū*, but before *r* + cons. it nearly always represents the idg. *a*.

Skr. *ū* = idg. *ū*:

skr. *dhūmá-s*, smoke, vapor, gr. *θῦμός*, lat. *fūmus*.

skr. *çúra-s*, mighty, bold, hero, gr. *-κυρός* in *ἄκυρος*.

ved. *mūṣ-*, mouse, gr. *μῦς*, lat. *mūs*, ohg. *mūs*.

Skr. *ūr* before consonants (in the neighbourhood of labial sounds) = idg. *a*r, *a*l:

skr. *pūrva-s*, first, cf. oslav. *prǔvǔ* (*prǐvǔ*) and with *m* goth. *fruma*.

skr. *pūr*, fortified town, cf. gr. *πόλις*.

skr. *mūrdhā* (*n*), head, cf. ags. *molda*.

In skr. *ūrmí-*ṣ, wave (= ags. *wielm*, *wylm*, ohg. *walm*) and *ūrṇā*, wool (cf. goth. *wulla* with *l*), *ūr* represents idg. *u̯al*; in skr. *ūrdhvá-s*, high (cf. gr. *ὀρθός*, lat. *arduus*), *ūr* = idg. **u̯ar*.

In cases as skr. *ūḍhá-s*, carried, ved. *dūdāç-*, not pious, *ū* is lengthened from *u* (see § 61 and § 63).

§ 29. **Skr. e.** In skr. *e* have fallen together the idg. tautosyllabic combinations *aṯ*, *eṯ*, *oṯ* (but in no case *aṯ*, for this diphthong was contracted to *i* before the separation of the Indogermanic dialects).

Skr. *e* = idg. *aṯ*:

skr. *édhas*, fuel, cf. gr. *αἶθω*, lat. *aedes*, ohg. *eit*.

skr. *sétu-*ṣ, joining, dam, bridge, cf. lat. *saeta*, bristle, ohg. *seid*, snare.

Skr. *e* = idg. *eṯ*:

skr. *émi*, I go, gr. *εἶμι*.

ved. *heman-*, winter, gr. *χειμα*, *χειμών*.

Skr. *e* = idg. *oi*:

skr. *véda*, I know, gr. *οἶδα*, goth. *wait*.

skr. *bhāreṣ*, you may bear, gr. *Φέροις*, goth. *baírais*.

Skr. *ed*, *edh* sometimes corresponds to idg. *ezd*, *ezdh* (see § 63):

ved. *sedyát*, 3 pers. sing. optat. perf. from *sad-*, to sit, avest. *hazdyāp*.

skr. *edhí*, 2 pers. sing. imperat. from *as-*, to be.

§ 30. **Skr. o.** In skr. *o* have fallen together the idg. tautosyllabic combinations *au*, *eu*, *ou* (but not *əu*, which was contracted to *ū* before the separation of the Indogermanic dialects).

Skr. *o* = idg. *au*:

ved. *ojmán-*, strength, power, lat. *augmentum*.

Skr. *o* = idg. *eu*:

skr. *bódhāmi*, I perceive, gr. *πεύθομαι* (*πυνθάνομαι*), goth. *biuda*.

ved. *joṣtar-*, loving, cf. gr. *γευστήριον*.

Skr. *o* = idg. *ou*:

skr. *bubódha*, perceived, goth. *baup* (gr. **πεπουθα* supplanted by *πέπευθα*).

skr. *sūnó-s*, of the (a) son, goth. *sunaus*.

Skr. *oḍh* sometimes goes back on idg. *eǵh* + *t* (see § 61):

skr. *vódhum*, to carry, cf. *váhāmi*, lat. *vehō*.

skr. *sódhum*, to overpower, to withstand, cf. *sáhāmi*, gr. *ἔχω*.

§ 31. **Skr. r, ṛ, l, ḷ.** Skr. *r* corresponds to idg. *r* as well as to idg. *l*. The *ṛ* in some cases of the *-ar-* (*-tar-*) stems is not yet fully explained. Skr. *ḷ* is found in a few forms and derivates of the root *kalp-*, but even here it is a prācritism (*klptá-s* instead of **krptá-s*). The *ḷ* is not met with in any word: the Hindu grammarians added it to the alphabet only for the sake of symmetry.

Skr. *r* = idg. *r*:

skr. *ṛkṣa-s*, bear, gr. *ἄρκτος*, lat. *ursus*.

ved. *kṛp-*, appearance, shape, lat. *corpus*.

skr. *mṛtá-s*, dead, ohg. *mord*.

Skr. *r* = idg. *l*:

skr. *prthú-s*, wide, gr. *πλατύς*.

skr. *bhṛgu-s* n. propr., cf. lat. *fulgur*, *fulgeo*: *flagrāre*: gr.

Φλόξ, Φλέγω.

§ 32. **Skr. *āi*.** In skr. *āi* have fallen together the idg. tautosyllabic combinations *āi*, *ēi*, *ōi*.

Skr. *āi* = idg. *āi*:

ved. dat. sing. fem. *suṇapatyāi*, to her who has good offspring, gr. *χώρῃ*, goth. *gibai*.

Skr. *āi* = idg. *ēi*:

skr. *ādāikṣam*, I showed, gr. *ἔδειξα*.

Skr. *āi* = idg. *ōi*: no example.

§ 33. **Skr. *āu*.** In skr. *āu* have fallen together the idg. tautosyllabic combinations *āu*, *ēu*, *ōu*.

Skr. *āu* = idg. *āu*:

skr. *nāu-s*, ship, gr. *ναῦς*.

Skr. *āu* = idg. *ēu*:

skr. *dyāu-s*, heaven, gr. *Ζεὺς*.

Skr. *āu* = idg. *ōu*:

skr. *gāu-s*, cow, bull, gr. *βοῦς*, lat. *bōs* (**vōs*), ohg. *chuo*.

PART II.

SYSTEM OF CONSONANTS.

A. THE REPRESENTATION OF THE INDOGERMANIC CONSONANTS IN SANSKRIT.

§ 34. **The Indogermanic consonants in general.** The mother-language had semivowels, nasals, liquids, explosives and spirants.

Semivowels: *i̇*, *u̇*.

Nasals: *m* (labial), *n* (dental), *ṇ* (guttural), *ṇ̄* (palatal). The *ṇ* only is met with before velars and middle gutturals (see below), the *ṇ̄* before palatals, but *m* and *n* were found at the beginning of words, between vowels and in pausa. Further *m* occurred before labial and dental mutes, *n* before dental mutes.

Liquids: *r*, *l*. The existence of *l* in the mother-language appears not only from the fact, that the languages of Europe in general agree with each other in the distribution of *r* and *l*, but also from Fortunatov's rule (§ 44).

Explosives: To the explosives belongs the spiritis lenis, which is not indicated in writing. The other explosives were labial, dental or guttural. There were three series of gutturals,

which are not determinated with perfect physiological accuracy, viz. the so-called velars (most backward in the mouth; they were formed by the hindermost part of the tongue and the soft palate), the middle gutturals (a little more in the fore-part of the mouth; perhaps their explosion took place at the hard palate), the palatals (most forward in the mouth; their explosion took place at the foremost part of the hard palate). Some scholars believe, that there were no palatal explosives in the mother-language, and assume palatal spirants instead of them (see Bechtel 370 sqq.): against this theory Museum, 1, 94 sq.

So we have to assume the following series of explosives:

Labials: *p, ph, b, bh.*

Dentals: *t, th, d, dh.*

Velars: *q, qh, g, gh.*

Middle gutturals: *k, kh, g, gh.*

Palatals: *ḱ, ḱh, ḡ, ḡh.*

About *ph, th, qh, kh, ḱh* (tenues aspiratae) and *bh, dh, gh, ḡh, ḡh* (mediae aspiratae) is to be observed, that they are compound consonants, consisting of an explosive + *h*.

Bezenberger (Bezz. Beitr. 16, 234 sqq.) has proved, that there was an original difference between the gutturals, which in the western group are represented by labialized gutturals (see § 52), and those, which in all dialects are preserved as pure gutturals (cf. Meillet, Mém. de la Soc. de Ling. 8, 277, sqq. and Hoffmann, Bezz. Beitr. 18, 149 sqq., who do not convince me).

As we have said above, there were also spirants in the mother-language, viz. *s, z, j, v, p, ð*. The existence of the idg. *z* was discovered by Osthoff (Kuhn's Zeitschr. 23, 87 sqq.). About *p* and *ð* see Brugmann 1, 409 and Kretschmer, Kuhn's

Zeitschr. 31, 429 sqq. Von Fierlinger (Kuhn's Zeitschr. 27, 478 sq. note) supposes, that also in those cases, where an Indian *h* corresponds to a Greek *γ*, a spirant may have been the original sound: this theory however is quite uncertain and would not even seem very probable. In no case we can accept Kozlovskij's theory about an idg. *χ* (Arch. f. slav. phil. 11, 383 sqq.): see my remarks on this subject (Arch. f. slav. phil. 16, 380 sq.).

Semivowels.

§ 35. **Idg. i.** The idg. *i* remained unchanged in Indian, except in the tautosyllabic combinations *ai*, *ei*, *oi*, which in Aryan fell together in *ai* and in Indian were contracted to *e* (see § 7, 9, 11):

idg. **iós*: skr. *yá-s*, who, gr. *ὄς*.

idg. **iēqr-t*, genit. **ieqnós*: skr. *yákṛt* (with *a* instead of *ā* by the influence of the casus obliqui, cf. avest. *yākarē*), liver, gr. *ἥπαρ*, lat. *jecur*.

idg. **iaghnó-s*: skr. *yajñá-s*, sacrifice, gr. *ἄγνός*.

idg. **iudh-*: skr. *yúdḥ-*, battle, gr. *ὕσμινη*.

idg. **iusm-*: skr. *yusma-*, you, gr. *ὕμεῖς*, lesb. *ὕμμες*, cf. goth. *jūs*.

idg. **éin(m)*: skr. *áyam*, I went, gr. *ἦα* (**ἦα*).

idg. **tréies*: skr. *tráyas*, three, gr. *τρεῖς*, lat. *trēs*, goth. *preis* (from **priiz*).

idg. **médhio-s*: skr. *mádhyas*, gr. *μέσος*, *μέσος*, lat. *medius*, goth. *midjis*.

idg. **giā*, **giā*: skr. *jyā*, bowstring, lith. *gija*, thread, cf. gr. *βίος*, bow.

In Vedic there was an exchange of *y* and *iy* after conso-

nants, which doubtlessly goes back to the Indogermanic period (see Brugmann 1, 112 sq. 115 sq.).

Before *ī* at the beginning of words *i* seems to have disappeared (cf. § 36).

§ 36. **Idg. u.** The idg. *u* remained unchanged in Indian, except in the tautosyllabic combinations *au*, *eu*, *ou*, which in Aryan fell together in *au* and in Indian were contracted to *o* (see § 7, 9, 11):

idg. **uēqos*, **uēges*:- skr. *vācas*, word, gr. *ἔπος*.

idg. **uōq-s*, genit. **uogós*: skr. *vāk*, voice, lat. *vōx*, gr. *ὦπ-*.

idg. **uōīda*: skr. *vēda*, I know, gr. *οἶδα*, goth. *wait*.

idg. **uōīko-s*: skr. *veça-s*, house, gr. *οἶκος*, cf. lat. *vīcus*, goth. *weihs* and skr. *vīç-*, people.

idg. **néuo-s*: skr. *nāva-s*, new, gr. *νέος*, lat. *novus*, cf. ved. *nāvya-s*, gr. *νεῖος*, lat. *Novius*, goth. *niujs*.

idg. **bhāgheues*: skr. *bāhāvas*, arms (plur. of *bāhú-ç*), gr. *πῆχεες*, *πῆχεις*.

idg. **hues*:- skr. *çvāsimi*, I breathe, I sigh, lat. *queror*.

idg. **suādú-s*: skr. *svādú-ç*, sweet, gr. *ἡδύς*, lat. *suāvis* (after the femin. idg. **syāduī*, cf. lat. *tenuis*: skr. *tanú-ç*), ags. *swéte*, os. *swōti*.

idg. **sóluo-s*: skr. *sārva-s*, entire, all, gr. *ὅλος*, *οὔλος*.

In Vedic there was an exchange of *v* and *uv* after consonants, which doubtlessly goes back to the Indogermanic period (see Brugmann, 1, 140, 143).

Before *ñ* (idg. *ñ*, *ə*) at the beginning of words *u* was lost in Indian: examples of this rule (*úraṇa-s*, *ūrdhvá-s*, *ūrmí-ç*, *ūrṇā*) are mentioned in § 13. Osthoff (Morphol. unters. 4, X sq. note) assumes an analogous loss of *i* before *ī* (perf. *iyája*, desiderat. *íyaks*:- *yájati*, worships; intens. *iyasyate*: *yásyati*, gets tired with working).

In some Indian dialects *v* seems to have been changed to *m*. Traces of this change are perhaps ved. *áma-s*, this: avest. *ava-*, oslav. *ovǔ* and skr. *gyāmá-s*, dark: *gyāvá-s*, oslav. *sivǔ*. But it can be hardly doubted, that sometimes there were forms with *m* by the side of the original with *u* in the mother-language. About the suffixes with *u*, resp. *m* see Brugmann 2, 189, 379 &c.: most striking is ved. *dāmane*, gr. *δόμεναι*: ved. *dāvāne*, gr. *δοφέναι*. Cf. also skr. *drāmāmi*, I run, gr. *ἔδραμον*, *δέδρομα*, *δρόμος*: skr. *drāvāmi*.

Nasals.

§ 37. **Idg. m.** In general the idg. *m* remained unchanged. Perhaps we may assume, that *mr* at the beginning of words became *br* in Indian (skr. *brāvīti*, speaks: avest. *mraoiti*, see Osthoff, Morphol. Unters. 5, 130 sqq., but with *mr* skr. *mriyáte*: lat. *morior* and other words).

Instances of idg. *m* = skr. *m*:

idg. **mātē(r)*: skr. *mātá*, mother, gr. *μήτηρ*, lat. *māter*, ohg. *muoter*.

idg. **mṛtós*: skr. *matá-s*, thought, gr. *-ματος*, lat. *-mentus*, goth. *munds*.

idg. **mṛtís*: skr. *mṛti-s*, death, lat. *mors*, genit. *mortis*.

idg. **mnā-*: skr. *mnāta-s*, mentioned, gr. *μιμνήσκω*, *μνήσω*, *μέμνημαι*.

idg. **mlā-*: skr. *mlāyāmi*, I wither, gr. *βλάξ*, genit. *βλαῖός*, slack, lazy, stupid (**mlā-k-s*).

idg. **mēm-*: skr. *vāmāmi*, *vāmimi*, I vomit, gr. *έμέω*, lat. *vomō*.

idg. **smēi-*: skr. *smāyate*, smiles, gr. *Φιλομμειδής*, *μειδιάω*, lat. *mīrus* (skr. *vi-smayate*, is astonished), engl. *smile*.

idg. **ghormós*: skr. *gharmá-s*, warm, warmth, heat, lat. *formus*, goth. *warms*, cf. gr. *θερμός*.

idg. **augmen-*: ved. *ojmán-*, strength, power, lat. *augmen, augmentum*.

idg. **ǵómbho-s*: ved. *jámbha-s*, set of teeth, tooth, gr. γόμφος, ohg. *chamb*, engl. *comb*.

idg. **tó-m*: skr. *tám*, gr. τόν, lat. *is-tum*, goth. *þan-a*, acc. pron. dem. **to-*.

idg. **bhérontōm*: skr. 3 pers. plur. imperat. med. *bhárantām*, they must bear, gr. 3 pers. plur. imperat. act. Φερόντων.

Before *t* and *ṭ* the idg. *m* became *n*:

idg. **ǵémtu*: ved. *ǵántu*, he must go.

idg. **ǵegm̥m̥uōs*: ved. *jaganvān*, having gone (cf. § 18).

The idg. combination *ms* is represented by *n* at the end of words, by *nis* between vowels:

idg. **dems*: ved. *dán*, of the house, gr. δεσ- in δεσπότης (ved. *pátir dán*, *dámpati-ṣ*).

idg. **ómso-s*: skr. *ámsa-s*, shoulder, goth. *ams*, cf. gr. ὤμος and lat. *umerus*.

§ 38 **Idg. n.** In general the idg. *n* remained unchanged:

idg. **nāu-s*: skr. *nāu-ṣ*, ship, gr. ναῦς, cf. lat. *nāvis* and icel. *nó-* (see Streitberg, Zur germanischen sprachgeschichte, Strassburg 1892, 49 sqq.).

idg. **nébhos*: skr. *nábhas*, sky, gr. νέφος, cf. gr. νεφέλη, lat. *nebula*, ohg. *nebul*.

idg. **nōm̥*: skr. *nāma* (*n*), lat. *nōmen*, cf. gr. ὄνομα and goth. *namō*.

idg. **séno-s*: ved. *sána-s*, old, gr. fem. ἔνη, cf. lat. *senex* and goth. *sineigs*.

idg. **uidmenai*: ved. *vidmāne*, to know, gr. ἴδμεναι.

idg. **suépno-s*, **supnó-s*: skr. *svápna-s*, sleep, lat. *somnus*, icel. *svefn*, with idg. *u* gr. ὕπνος.

idg. **bhéndhono-m*: skr. *bándhana-m* binding, band, bond,

goth. *bindan*, cf. skr. *bāndhu-s*, connection, relative, friend, gr. *πενθερός*, father in law, and lat. *offendix*, *offendimentum*.

idg. **tékpōn*: skr. voc. *tákṣan*, carpenter, gr. *τέκτον*.

After *c* and *j* (idg. *q*, *k*, resp. *g*, *g*, *ǵ*) *n* was palatalized: so idg. **iaghnó-s* became skr. *yajñá-s*, sacrifice. The only instance of *ñ* (idg. *n*) after *c* is skr. *yācñá*, request: *yácate*, asks.

After *s*, *r*, *ṛ*, *ṝ* the dental nasal was turned into the lingual *ṇ*:

idg. **kṛsno-s* (**qṛsno-s*?): skr. *kṛṣṇá-s*, black, opruss. *kirsna*-, cf. oslav. *črěnnŭ*.

idg. **usnó-s*: skr. *uṣṇá-s*, hot: *óṣāmi*, I burn, gr. *εὔω*, lat. *ūrō*. Cf. lith. *usnis*, thistle.

idg. **érnos*: ved. *árṇas*, flood, stream, cf. ohg. *ernust*, ags. *eornost* (see my Etym. wb. der got. sprache s. v. *arniba*).

idg. **mrñámi*: ved. *mṛṇámi*, I crush, gr. med. *μάρναμαι*.

idg. **tṛño-m*: skr. *tṛṇa-m*, grass, cf. goth. *paúrnus*.

Not only if *s*, *r*, *ṛ*, *ṝ* immediately preceded, the dental *n* was lingualized: the change of *n* to *ṇ* took place, at whatever distance from it the lingual consonant or vowel might be found, unless there intervened a palatal affricate, a *ç*, a dental or a lingual (see Whitney § 189 sqq.). Instances:

skr. *dvéṣāṇi*, 1 pers. sing. praes. conj. (imperat.) of *dvéṣmi*, I hate.

ved. *cákṣaṇa-m*, sight, appearance: *cáṣte*, appears, sees, looks.

skr. *Rudréṇa*, instr. sing. of *Rudrá-s*.

skr. *váṛiṇe*, dat. sing. of *vári*, water.

skr. *kṛñámi*, I buy, cf. gr. *ἐπιβάμην*.

skr. *cíkīṛṣamāṇa-s*, part. praes. of *cíkīṛṣate*, desires to do (desid. of *karóti*, does).

The idg. combination *ns* is represented by *n* at the end of words (cf. Lorentz, Bezz. Beitr. 21, 173 sqq.), by *ns* between vowels:

idg. **u_lqons*: skr. acc. plur. *vṛkān*, wolves, cf. gr. *λύκοις*, lat. *equōs*, *lupōs*, goth. *wulfans*, *dagans* (also skr. acc. plur. *agnīn*, *paraçūn*, cf. goth. *anstins*, *sununs* &c.).

idg. **ḡhans*:- skr. *hamsá-s*, goose, swan, gr. *χέν*, ohg. *gans*, cf. lat. *anser*.

About idg. *ln* (*rn*), skr. *ṛ* see § 44.

§ 39. **Idg. ñ.** The idg. *ñ* remained unchanged, unless the following guttural (resp. velar) was palatalized by the influence of a palatal vowel:

idg. **oiko-s*: skr. *aniká-s*, lap, hook, gr. *ὄγκος*, lat. *uncus*, cf. goth. *hals-agga*.

idg. **bhoṇgo-s*, **bhoṇgā*: skr. *bhaṇgá-s*, wave, lith. *banga*.

But *ñ* became *ñ̃*, if the following guttural (resp. velar) was changed into a palatal affricate:

idg. **pénige*: skr. *páñca*, five, gr. *πέντε*, lat. *quinque*, goth. *fimf*.

§ 40. **Idg. ñ̃.** The idg. *ñ̃* remained unchanged before idg. *ḡ*, skr. *j*, but it became *ṁ* before idg. *ḱ*, skr. *ç* and before idg. *ḡh*, skr. *h*. In other words: if the following palatal guttural became a spirant, *ñ̃* was reduced to anusvāra.

idg. **ēnóñka*: skr. *ānám̐ça*, I attained (perf. of *açnómi*, idg. **h₁knéumi*), cf. *ám̐ça*-, portion, part, gr. *ἤνεγκον*, *ἐνήνοχα*, lat. *nanciscor*.

idg. **ánḡhos*: ved. *ám̐has*, distress, lat. *angus*- in *angustus*, cf. gr. *ἄγχω*, lat. *angō* &c.

Liquids.

§ 41. **The liquids in general.** Nowadays no one doubts any more, but that the mother-language, possessed at least two liquids, viz. *r* and *l*. Since the clever article of Fortunatov on the representation of dental + liquid in Indian, it

may be called very probable, that the ancient difference between *r* and *l* still existed in the Aryan period. In Iranian *r* and *l* fell together into *r* and in the Vedic dialect of Indian *l* is but rare: in most cases epic and class. *l* is represented by ved. *r*. Therefore we need not be surprised, that the older linguists considered *l* as younger than *r*.

Yet it can not be denied, that in as early a period as the Indogermanic there often stood forms with *r* and *l* side by side with each other (*l*:*r* in suffixes see Brugmann 2, § 62, 74—77, 98, 107, 119—122; in root-syllables Persson, Studien zur lehre v. d. wurzelerweiterung &c., Upsala 1891, 59—67, cf. P. B. Beitr. 17, 437 sqq. and my Etym. wb. der got. sprache s. v. *alhs*, *baírhts*, *biraubōn*, *gras*, *grēdus*, *hrūk*, *kabbō*, *stilan*). This Indogermanic change of *r* and *l* does not properly belong to the province of Indian phonetics and so we may leave it unnoticed. Likewise such cases as skr. *bhunákti*: goth. *brūkjan*, skr. *bhanákti*: goth. *brikan* are to be explained by phonetic rules of the mother-language.

§ 42. **Idg. r.** In general the idg. *r* remained unchanged. Instances are:

idg. **réǵiō*: skr. *rájyāmi*, I am (get) red, affected with a strong feeling, gr. *ῥέζω*.

idg. **rē-s*: skr. *rā-s*, wealth, lat. *rēs*.

idg. **rēk-s*, stem **rēǵ-*: skr. *rát* (instead of **rāk* from **rāk-s*, which was to be expected), lat. *rēx*.

idg. **reud-*: skr. *ródimi*, I weep, lat. *rūdō*, ags. *réotan*.

idg. **bhérō*: skr. *bhārāmi*, I bear, gr. *Φέρω*, lat. *ferō*, goth. *baíra*.

idg. **péri*: skr. *pári*, around, gr. *πέρι*, lat. *per*, goth. *faír-*.

idg. **smérō*: skr. *smārāmi*, I remember, cf. lat. *memor*.

idg. **dedórĥa*: skr. *dadárĥa*, I saw, gr. *δέδορκα*.

idg. **ger-*: skr. *jāgármī*, I wake, gr. *ἐγείρω*, *ἐγρήγορα*.

idg. **grasō*: skr. *grásāmi*, I eat, I devour, gr. *γράω*.

idg. **qrīnāmi*: skr. *krīṇāmi*, I buy, cf. gr. *ἐπιδάμην*.

idg. **māter*: skr. vocat. *mātar*, mother, gr. *μηῆτερ*.

About the combinations of *r* with dentals see § 44. Unexplained is the *l* in cases as skr. *luñcāmi*, I pull out, I pull off, I husk: gr. *ὀρύσσω*, lat. *runcāre*; skr. *lumpāmi*, I break (already ved., by the side of *rúpyāmi*, I have belly-ache): lat. *rumpō*, ags. *réofan*, and many others. In some of them we must assume an Indogermanic change of *r* and *l*.

§ 43. **Idg. l.** In Vedic the idg. *l* has fallen together with *r*, except when followed by a dental. The words, containing *l* are to be considered as loans from an other dialect. In the epic and classical language the original *l* is represented in some cases by *l*, in other cases by *r*; often the same word occurs in two forms, with *l* and with *r*. The distribution of the two liquids in the Brāhmaṇa's is nearly the same as in classical Sanskrit. I am inclined to believe, that the idg. *l* regularly remained unchanged in Sanskrit: the forms with *r* may have been borrowed from other dialects. Hence it appears, that the Sanskrit of Madhyadeśa is not a younger form of the western dialect, in which the hymns of the R̥gveda have come down to us.

Idg. *l* = skr. *l*:

idg. **lambetai*: skr. *lāmbate*, hangs down (already Çat. Br., but Rgv. *rāmbate*), cf. lat. *lābor*.

idg. **léighmi*: skr. *léhmi*, I lick (but ved. *réhmi*), cf. gr. *λείχω*, lat. *lingō* and goth. *-laigōn*.

idg. **limpō*: skr. *limpāmi*, I smear (already Athv. and Brāhm., but Rgv. *rip* — except however 1, 191, 1-4 *alipsata*), cf.

gr. λίπος, λιπαρός, αλείφω, αλοιφή, lat. *lippus*, goth. *bi-leiban*, *laiba*, *liban*.

idg. **lubh-*, **leubh-*: skr. *lúbhyāmi*, I desire (already Athv. and Brāhm., even Rgv. 10, 103, 12 *lobháyanti*), lat. *lubet*, goth. *liufs*.

idg. **talā-*: skr. *tulā*, balance (already Vājasaneyi-saṁhitā and Brāhm.; with unexplained *u* instead of *i*), cf. gr. *τάλαντον*, *τελαμών*, lat. *tollō*, goth. *þulan*.

idg. **alpo-s* (**olpo-s*?): skr. *álpa-s*, small, cf. lith. *alpti*, to languish, to swoon away, *alpnas*, weak, fainted (also gr. *ἀλαπαδνός*?).

ldg. *l* = skr. *r*:

idg. **léksō*, **eléksō*: skr. *rákṣāmi*, I guard, I protect, gr. *ἀλέξω*.

idg. **lelóizqa-*: skr. *riréca*, I left, gr. *λέλοιπα*, goth. *laihw*, perf. of skr. *riṇácmi*, gr. *λείπω*, goth. *leihwa*.

idg. **léudhō-*: skr. *róhāmi* (ved. also *ródhāmi*, which is the older form), I rise, I grow, goth. *liuda*, cf. gr. *ἐλεύσομαι*, *εἰλήλουθα*.

idg. **pel-*, **plē-*: skr. *príparmi*, I fill, gr. *πίμπλημι*, *πληρής*, lat. *im-pleō*, *plēnus*, cf. with *l* goth. *fulls*.

idg. **pléthetai-*: skr. *práthate*, broadens, cf. *prthíu-s*, broad, gr. *πλατύς*.

About the combinations of *l* with dentals see § 44.

§ 44. **Combinations of r and l with dentals.** Fortunatov (Bezz. Beitr. 6, 215 sqq.) has given the following rule: *r* + dental remained unchanged, but in the combinations of *l* and a following dental the *l* disappeared and the dental was lingualized. It is to be noticed, that the word *dental* is taken here in its widest sense. Bechtel 382 sqq., Windisch (Kuhn's Zeitschr. 27, 168), Darbishire (Reliquiae philologicae, Cam-

bridge 1895, 202 sqq. 241 sqq.) and many other scholars have accepted this rule, but Brugmann 1, 213, Bartholomae (Idg. forschungen 3, 157 sqq.), J. Schmidt (Kritik der sonantentheorie 1 sq. note) and Wackernagel 1, 171 prefer to believe, that all those linguals, which go back on a combination of liquid + dental are due to Prācritic influence.

Examples of *r* + dental:

idg. **kértō*: skr. *kārtāmi* (epic, the classical praesens is *kṛntāmi*), I cut, lith. *kertu*.

idg. **uértō*: skr. *vārtāmi* (more common med. *vārte*), I turn, move, go on, abide, exist, am, am present, lat. *vertō*, goth. *waírpa*.

idg. **mérdō*: skr. *mārdāmi*, I press, squeeze, crush, destroy, cf. lat. *mordeō* (= skr. causat. *mardáyāmi*).

idg. **pérdetai*: skr. *pārdate* (Dhātup.), breaks wind, gr. *πέρδεται*, cf. hg. *firzen*, *furzen*.

idg. **ardho-s* (**ordho-s*?): skr. *ardhá-s*, half, cf. lith. *ardyti*, to separate.

idg. **ghordho-s*: skr. *gardha-s*, desire, avidity, cf. goth. *grēdus*, hunger.

idg. **kórno-s*: skr. *kārṇa-s*, ear.

idg. **uórno-s*: skr. *vārṇa-s*, cover, outside, color, caste, sound, akin to *vṛṇómi*, I cover, *vārūtha-m*, cover, protection, gr. *ἔρυσθαι*, goth. *warjan* &c.

idg. **dhérsō*: skr. *dhārṣāmi* (more common *dhṛṣṇómi*), I dare, cf. gr. *θαρσέω*, *θαρρέω*, *θαρσαλέος*, *θρασύς* &c., goth. *ga-dars*.

idg. **uersā*: skr. *varṣā*, rain, gr. *ἔρση*, *ἔρση*, *ἔέρση*.

Examples of *l* + dental:

idg. **palto-s*: skr. *paṭa-s*, woven stuff, cloth, garment, cf. oslav. *platěno*, russ. *polotnó*, linen, perhaps also skr. *paṭāla-m*,

cover, veil, mass, gr. (thrac.?) πέλτη, a little shield, and icel. *feldr*, cover.

idg. **paltu-s*: skr. *paṭu-s*, sharp, cf. gr. πλατύς, saltish, brack.

idg. **sphalt-*: skr. *sphātāmi*, I burst (Dhātup. *visaraṇe*), ohg. *spaltan* (from *spaldan* with germ. *d* from *p* by Verner's law).

idg. **ualto-s*: skr. *vaṭa-s* (*vaṭa-m*, *vaṭi*), snare, cf. lith. *valtis*, thread, net, russ. *vólotĩ*, thread.

idg. **ghōlto-*: skr. *hātaka-m*, gold (also „Goldland”, a certain country in India, the inhabitants of which were called *Hātakās*), oslav. *zlatò*, russ. *zóloto*, cf. with *l* goth. *gulþ*.

idg. **gelth-* (**ġelth-*?): skr. *jāthāra-m*, belly, womb, goth. *kilþei* (cf. with *r* skr. *jartú-*, vulva, Uṇādisūtra).

idg. **kulth-*: skr. *kūṭhāra-*, axe, lat. *culter*.

idg. **kəlno-s*: skr. *kiṇa-s*, callosity, lat. *callus* (*callum*).

idg. **kulni-s*, **kulno-s*: skr. *kūṇi-s*, lame of one arm, gr. κυλλός.

idg. **ōlní-s*: skr. *āṇi-s* (*aṇi-s*), the leg immediately above the knee, linch-pin, cf. gr. ὠλένη, lat. *ulna*, goth. *aleina* and ohg. *lun*, os. *lunisa*, ags. *lynes*, linch-pin (with *lu* from *l*?).

idg. **pālñí-s*: skr. *pāṇi-s*, hand, cf. gr. παλάμη, lat. *palma* and ags. *folm*.

idg. **pélno-s*: skr. *paṇa-s*, wager, stake, prize, wages, a coin &c., lith. *pelnas*, wages, oslav. *plěňũ*, booty, cf. gr. πωλέω and ohg. *fāli*.

idg. **ǵālnī*: ved. *vāṇi*, reed, rush, cf. goth. *walus*.

idg. **bhāls-*: skr. *bhāṣate*, speaks, *bhāṣati*, barks, lith. *balsas*, voice, tone, icel. *bjalla*, engl. *bell*.

idg. **lals-*: skr. *lāṣāmi*, I desire, cf. *lālāsa-s*, desirous, gr. λιλαιόμαι and goth. *lustus* (*lu* from *l*?).

idg. **pěls-*: skr. *pāṣāṇá-s*, ved. *pāṣyà-*, stone, gr. πέλλα· λίθος, cf. ohg. *felis*.

The apparent exceptions to Fortunatov's rule may be explained as prācritisms. Such cases are:

skr. *bhaṭa-s*, soldier: *bhṛtá-s*, hired (cf. gr. Φέρω).

skr. *káṭa-s*, mat: *kartana-m*, spinning (cf. gr. κύρτος).

skr. *kaṭú-ṣ*, sharp: **kartú-ṣ* (cf. lith. *kartus*).

skr. *naṭa-s*, dancer, actor: *nartaka-s*, dancer (*nṛtyāmi*, I dance).

By no means all linguals go back on *l* (*r*) + dental, but they are often original dentals, which are lingualized by Prācritic influence. Instances are skr. *aṭāmi*, I roam, I wander about: ved. *átāmi*; skr. *bhaṇāmi*, I speak: ved. *bhánāmi* &c.

§ 45. **Metathesis of r.** On this subject see Brugmann 1, 214 and Persson, Studien zur lehre v. d. wurzelerweiterung 218 sqq. Instances of *ra:ar:* fut. *drakṣyāmi*, perf. 2 pers. sing. *dadṛaṣṭha*, inf. *dráṣṭum* from the root *darṣ-*, idg. **derk-*, to see; perf. 2 pers. sing. *tatrápṭha* (*tatárpṭha*) from the root *tarp-*, idg. **terp-*, to be satisfied; fut. *srapṣyāmi* (*sarpsyāmi*), aor. *ásrāpsam* (*ásārpsam*) from the root *sarp-*, idg. **serp-*, to creep.

Labial explosives.

§ 46. **Idg. p.** Idg. *p* = skr. *p*:

idg. **pətē(r)*: skr. *pitá*, gr. πατήρ, lat. *pater*, goth. *fadar*.

idg. **pəróś*: skr. *purás*, in front, forward, before, gr. πάρος, cf. goth. *faúra*.

idg. **pelekū-s*: skr. *paraṣú-ṣ*, axe, gr. πέλεκυς, cf. goth. *filhan*, *filigri*.

idg. **pṛṣṇi-s*: skr. *pṛṣṇi-ṣ*, speckled, cf. gr. περκνός and perhaps ohg. *forhana*, trout.

idg. **perut*: skr. *parut*, last year, cf. gr. πέρυσσι, dor. πέρυτι, mhg. *vert*.

idg. **pró*: skr. *prá-*, forward, onward, gr. *πρό*, goth. *fra-*, cf. lat. *prōd*, *prō*.

idg. **pléuō*: skr. *plāvāmi*, I float, I swim &c., gr. *πλέω*, cf. lat. *pluit* and with suffix *-d* ags. *fléotan*.

idg. **népōt-s*: ved. *nápāt*, descendant, grandson, lat. *nepōs*, ohg. *nefo*.

idg. **syépno-s*: skr. *svápna-s*, sleep, dream, lat. *somnus*, icel. *svefn*, cf. gr. *ὕπνος*.

idg. **sérpō*: skr. *sárpāmi*, I creep &c., gr. *ἔρπω*, lat. *serpō*.

idg. **spék̑-s*: ved. *spát̑* (instead of **spak*, stem *spac̑-*), lat. *-spex* in *auspex*, *haruspex*, cf. skr. *pác̑yāmi* (Dhātup. also *spác̑āmi*), lat. *specio*, ohg. *spehōn*.

How far the Aryan *ph* (skr. *ph*, iran. *f*) goes back on idg. *ph*, is still unsettled (cf. Hoffmann, Bezz. Beitr. 18, 154 sqq.).

Instances of skr. *ph*, iran. *f*:

skr. *kapha-*, phlegm, avest. *kafa-*.

skr. *ṣaphá-*, hoof, avest. *safa-*.

§ 47. Idg. **b**. Idg. *b* = skr. *b* (cf. P. B. Beitr. 18, 236 sqq. 20, 325 sqq.):

idg. **bolo-m*: skr. *bála-m*, strength, power, cf. oslav. *bolij*, greater, larger, lat. *dē-bilis*, powerless, weak (cf. von Grienberger, Zeitschr. für deutsche philologie 27, 453 sqq. and Osthoff, Idg. forschungen 6, 1 sqq.).

idg. **bālo-s* (*ā* or *ō*?): skr. *bālá-s*, young, foolish, white-russ. *bal*, liar, cf. also russ. *balovátĩ*, to dally, to fondle, to spoil.

idg. **balbal-*, **barbar-*: skr. *balbalā-karomi*, I stammer, *barbará-s*, stammering, gr. *βάρβαρος*, cf. lat. *balbus* with broken reduplication.

idg. **bal-*: ved. *balbalīti*, whirls (*Uccāir dhūmah paramayā jūtyā balbalīti*, Çat. Br.), cf. gr. *βαλλίζω*.

idg. **buk-*: skr. *buk-kāra-s*, roar, bellow, gr. *βύκτης, βυκάνη*, lat. *būcina*.

idg. **belk-*, **blek-*: skr. *bárkara-s*, kid, slov. *blekati*, to bleat, *blekaš*, bleating buck.

idg. **buli-s*: skr. *buli-ṣ*, cunnus, buttock, lith. *bulis*, buttock, cf. lat. *bullā*, bubble, lith. *bumbulas*, knob, knot, *bumbulys*, turnip, russ. *búlka*, roll (bread), dutch *peul*, husk, pulse, *puilen*, to swell (in speaking of eyes: to start from the head).

idg. **bāl-* (with *ā* or *ō*?): skr. *jam-bāla-s*, pool, mud (*jam-*, earth, + *-bāla-s*), ags. *pól*, swed. *pöl*, cf. lith. *bala* and oslav. *blato*, russ. *bolóto*.

idg. **pibō*: skr. *pībāmi*, I drink, lat. *bibō* (irish *ebaim* proves, that the first consonant was an idg. *p*).

idg. **lamb-*, **lāb-*: skr. *lāmbate*, hangs down, lat. *lābitur*, cf. goth. *slēpan*, ags. *slāpan*, to sleep, ohg. *slaf*, dutch *slap*, slack, oslav. *slabŭ*, weak.

idg. **bd-*: ved. *upa-bdā-s*, stamping, trampling, gr. *ἐπίβδχι*, the day after a feast, cf. *πεδᾶ*, immediately after, and skr. *pāt*, foot, gr. *πούς* &c.

§ 48. **Idg. bh.** Idg. *bh* = skr. *bh*:

idg. **bhērō*: skr. *bhārāmi* (*bībharṃi*), I bear, gr. *φέρω*, lat. *ferō*, goth. *baíra*.

idg. **bhéuō*: skr. *bhāvāmi*, I am, cf. gr. *φύω*, lat. *fui*, ohg. *būan*.

idg. **bhrātē(r)*: skr. *bhrātā*, gr. *φράτηρ*, lat. *frāter* &c.

idg. **bhrū-s*, **abhhrū-s*: skr. *bhrū-ṣ*, eye-brow, gr. *ὀφρῦς* (from **ᾰφρῦς*, cf. Schmidt, Kuhn's Zeitschr. 32, 376 sqq.), cf. oslav. *brŭvŭ*, *obrŭvŭ* and ohg. *brāwa*.

idg. **nébhos*: skr. *nábhas*, cloud, sky, gr. *νέφος*, cf. gr. *νεφέλη*, lat. *nebula*, ohg. *nebul*.

idg. **ǵómbho-s*: skr. *jámbha-s*, set of teeth, tooth, gr. *γόμφος*, ohg. *chamb*.

When followed by an aspirate, *bh* lost its aspiration:

idg. **bhéudhō*: skr. *bódhāmi*, I perceive, goth. *biuda*, cf. gr. *πυνθάνομαι*, *πεύθομαι*.

idg. **bhṇḍhnāmi*: skr. *badhnāmi*, I bind, cf. *bándhana-m*, binding, band, bond, goth. *bindan*: to this root belong also skr. *bándhu-ṣ*, connection, relative, friend, gr. *πενθερός* and lat. *offendimentum*, *offendix*.

Idg. *bh* + *t* is represented by *bdh*: see § 49.

We must assume with von Bradke (*Zeitschr. der D. Morgenl. Ges.* 40, 657 sqq.), that the not very numerous cases, in which the idg. *bh* is represented by skr. *h*, are loans from a Prācritic dialect. So we find skr. *grhṇāmi*: ved. *grbhṇāmi*, I seize; skr. *hárāmi*, I bear, I take: *bhárāmi*, I bear. Cf. prākṛ. *pahu-*: skr. *prabhū-*, lord; prākṛ. *hodi*, *hoi*: skr. *bhāvati*, is, &c.

Dental explosives.

§ 49. **Idg. t.** Idg. *t* = skr. *t*:

idg. **tṇnéumi*: skr. *tanómi*, I stretch, cf. gr. *τείνω*, lat. *tendō*, *tentus*, goth. *-panjan*. To the same root skr. *tanú-ṣ*, thin, gr. *τανυ-*, lat. *tenuis*, ohg. *dunni*.

idg. **tudō*: skr. *tudāmi*, I push, I strike, cf. ved. *tundate*, *tundānā-*, lat. *tundō* and goth. *stautan*.

idg. **tréies*: skr. *tráyas*, three, gr. *τρεῖς*, lat. *trēs*, goth. *preis*.

idg. **pétō*: skr. *pátāmi*, I fly, I fall, lat. *petō*, cf. gr. *πέτομαι*, *πίπτω*.

idg. **ṛértetai*: skr. *vártate*, turns, rolls, goes, abides, cf. lat. *vertō*, goth. *waírþa*.

Idg. *tn* remained unchanged in Indian:

idg. **pótnī*: skr. *pátnī*, lady, mistress, wife, cf. gr. *πότνια*.

idg. **ratnó-m* (**retno-m*?): skr. *rátna-m* (by the side of *ratná-m*), riches, treasure (ved.), jewel, pearl, cf. § 13.

After *ṣ* the dental *t* was lingualized:

idg. **oktō(u)*: skr. *aṣṭá* (ved.), *aṣṭáu*, eight, gr. *ὀκτώ*, lat. *octō*, goth. *ahtau*.

idg. **ustó-s*: skr. *uṣṭá-s*, burned, lat. *ustus*.

Before *c* the dental *t* was palatalized:

idg. **utko-*, **utke-*: skr. *ucca-* (from **utca-*), high, derived from idg. **ūd*, skr. *úd*, up, forth, out, goth. *ūt*, ags. *út*.

Akin to the assimilation of *tc* to *cc* was the transition of *tç* to *cch*: so *pacchás*, in hemistichs, goes back on **pat-çás*, **pad-çás*, derived from *pad-*, *pād-*, foot, quarter of a stanza.

The idg. combination *lt* became *ṭ*, see § 44.

Very difficult are the combinations of mediae aspiratae with *t*, which seem to be changed to mediae + *dh* before the end of the Indogermanic period.

Idg. *bh* + *t* = skr. *bḍh*:

ved. *dabdhá-s*, harmed, hurted, deceived: *dabhnómi*.

skr. *labdhá-s*, seized, taken, got: *lábhe*.

Idg. *dh* + *t* = skr. *ḍdh*:

skr. *baddhá-s*, bound: *badhnámi*.

skr. *buddhá-s*, perceived, awake: *bódhāmi*.

Idg. *gh* + *t* and *gh* + *t* = skr. *gdh*:

skr. *dagdhá-s*, burned: *dáhāmi*.

Idg. *ḡh* + *t* = skr. *ḍh*:

ved. *sāḍhá-s*, conquered: *sáhāmi*.

skr. *ūḍhá-s*, carried: *váhāmi*.

How far the Aryan *th* (skr. *th*, iran. *p*) represents an idg. *th*, is not sufficiently clear. A certain case of idg. *th* is the suffix of the 2 pers. sing. perf. *-tha*:

idg. **uóitttha*: skr. *véttha*, thou knowest, gr. *οἶσθα*, cf. goth. *waist* and see Zubaty, Kuhn's Zeitschr. 31, 4.

Instances of skr. *th*, iran. *p*:

skr. *rátha-*, chariot, avest. *rapa-*.

skr. *prthá-*, wide, avest. *pērēpu-*.

§ 50. Idg. *d*. Idg. *d* = skr. *d*:

idg. **didōmi*: skr. *dádāmi*, I give (**didāmi*), gr. *δίδωμι*, cf. lat. *dō*.

idg. **dékm̥*: skr. *dāṣa*, ten, gr. *δέκα*, lat. *decem*, goth. *taíhun*.

idg. **dru-*: ved. *dru-*, wood, gr. *δρυτόμος*, *δρῦς*, cf. goth. *triu* (idg. **drey-*), gr. *δόρυ* (idg. **dōru*), skr. *dāru* (idg. **dōru*).

idg. **dyō(u)*: ved. *dvā*, skr. *dvāu*, two, gr. *δύω*, lat. *duō*, cf. goth. *twai*.

idg. **sédos*: skr. *sādas*, seat, gr. *ἔδος*: skr. root *sad-*, to sit, lat. *sedeō*, goth. *sitan* &c.

idg. **skhind-*: skr. *chindānti*, they cut off, gr. *σχινδαλμός*, splinter, lat. *scindō* (cf. goth. *skaidan*, idg. root **skhait-*).

During or more likely long before the Aryan period *dd*, *ddh* were changed to *zd*, *zdh*. In Iranian the *z* of these combinations was preserved, but in Indian it disappeared after having developed an *i*. Example:

idg. **deddhí* (or already **dezdhí*): ar. **dazdhi*, avest. *dazdi*, skr. *dehí* (instead of **dedhí* from **daidhi*, **daizdhí*), give.

In certain cases *zd* became *žd* in Aryan, from which skr. *ḍ* (see § 63):

idg. **nizdó-s*: skr. *nīḍá-s*, nest, lat. *nīdus*, ohg. *nest*.

About the lingualization of *d* in *ld* see § 44.

Idg. *dn* was assimilated in Indian to *nn* (cf. however Bartholomae, Studien zur idg. sprachgeschichte 2, Halle 1891, 94 sqq.):

idg. **édno-m*: skr. *ánna-m*, food, rice, cf. gr. *ἔδανός* from **edəno-s*.

idg. **bhidnó-s*: skr. *bhinná-s*, split: *bhinádmi*, I split.

idg. **tudnó-s*: skr. *tunná-s*, pushed: *tudāmi*, I push.

Finally it should be mentioned, that skr. *dh* became *jj*. An instance of this rule is ved. *újjiti-s*, victory, from *ud-* and *jiti-s*.

§ 51. **Idg. dh.** Idg. *dh* = skr. *dh*.

idg. **dhérsō*: skr. *dhárṣāmi*, I dare, cf. gr. *θρασύς*, *θαρρέω*, *Θερσίτης*, goth. *gadars*.

idg. **dhūmó-s*: skr. *dhūmá-s*, smoke, gr. *θῦμός*, lat. *fūmus*.

idg. **dhēi* (root **dhēi-*): skr. *dháyāmi*, I suck, goth. *daddja*, cf. gr. *θῆσαι*, *θήσατο*, lat. *fēlāre*, *fēmina*, ohg. *tāan*. To the same root belongs idg. **dhēlu-s*: ved. *dhārú-s*, sucking, gr. *θήλυς*.

idg. **dhidhēmi*: skr. *dádhāmi*, I put (instead of **didhāmi*), gr. *τίθημι*, cf. ags. *dón*.

idg. **médhu*: skr. *mádhu*, honey, gr. *μέθυ*, ohg. *meto*.

idg. **kludhí*: ved. *ḡrudhí*, hear, imperat. of *ḡrṇómi*, I hear, gr. *κλύω* &c.

idg. **médhio-s*: skr. *mádhyā-s*, middle, gr. *μέσος*, lat. *medius*, goth. *midjis*.

In certain cases *zdh* became *ḡdh* in Aryan, from which skr. *ḡh* (see § 63).

idg. **mizdhó*: ved. *mīḡhám*, prize, contest, gr. *μισθός*, cf. goth. *mizdō*.

Idg. *dhn* remained unchanged in Indian:

idg. **bhudhnó-s*: ved. *budhná-s*, bottom, cf. gr. *πυθμήν*, *πύνδαξ*, lat. *fundus* and ohg. *bodam*.

When followed by an aspirate, *dh* lost its aspiration:

idg. **dhidhēmi*: skr. *dádhāmi*, I put, gr. *τίθημι*.

Idg. *dh* + *t* is represented by *ddh*: see § 49.

In many Sanskrit words and forms, when *dh* might be expected, we find however *h*. Instances:

idg. **-dhi*, ved. *-dhi*, *-hi*, skr. *-hi*, suff. 2 pers. sing. imperat. act., gr. *-θι*.

idg. **-medhai*, **-medhə*: ved. & skr. *-mahe*, *-mahi*, suff. 1 pers. plur. med., avest. *-maidē*, gr. *-μεθ*.

Cf. von Bradke (Zeitschr. der D. Morgenl. Ges. 40, 657 sqq.), who explains such cases by Prācritic influence.

Guttural explosives.

§ 52. **General remarks.** A few years ago only two series of gutturals were assumed, viz. a palatal and a velar series. Bezenberger (Bezz. Beitr. 16, 234 sqq.) has proved, that there was a third series — different from the palatals and velars —, which may be called the *middle* gutturals. In the western Indogermanic languages, viz. in Greek, Italic, Germanic and Celtic, the velars were labialized and the middle gutturals have fallen together with the palatals. In Aryan, Armenian, Phrygian-Thracian, Albanian and Balto-Slavonic the velars were not labialized, but have fallen together with the middle gutturals: here the palatals were changed to spirants. The velars and middle gutturals being represented in Aryan by *one* series, it is preferable not to separate them in a book on Sanskrit phonetics.

§ 53. **The palatalization-rule.** The palatalization-rule concerns the velars and middle gutturals in general: therefore it is to be treated in a separate paragraph, the more so as the discovery of this rule has had a decisive influence on the modern vowel-theories. It has been the strongest, if not the only argument for adopting, that the multiplicity of vowels in the European languages and in Armenian is more original than the Aryan simplicity.

This rule, which was discovered by several scholars at the same time (see Schmidt, Kuhn's Zeitschr. 25, 1—179), may be formulated as follows:

During the Aryan period, before the change of *ǣ* to *ǣ̃*, the gutturals (idg. middle gutturals and velars), were palatalized and changed to palatal affricates, when followed by idg. *ǣ̃*, *ǣ̃̃*, *ǣ̃̃̃*, and were preserved as gutturals in any other position (cf. however Meillet, *Mém. de la Soc. de Ling.* 9, 376 sqq.).

Instances of skr. *c*, *j*, *h* (from *jh*), going back on gutturals before *ǣ̃*, *ǣ̃̃*, *ǣ̃̃̃*:

idg. **qe*: skr. *ca*, and, gr. *τε*, lat. *que*.

idg. **qeru-s*, skr. *carú-s*, kettle, pot, icel. *hverr*.

idg. **getuōres*: skr. *catvāras*, four, goth. *fidwōr*, cf. gr. *τέσσαρες*, lat. *quatuor*.

idg. **pénqe*: skr. *pāñca*, five, gr. *πέντε*, lat. *quinque*, goth. *fimf*.

idg. **léuketai*: skr. *rócate*, shines, pleases, cf. gr. *λευκός*, lat. *lūcet*, goth. *liuhap*.

idg. **géretai*: ved. *járate*, crackles, invokes, cf. ohg. *quirit*.

idg. **áuges-*: skr. *ójas*, strength, power, cf. *ugrá-s*, mighty, terrible and lat. *augeō*, goth. *aukan*.

idg. **ghénmi*: skr. *hánmi*, I slay, cf. gr. *θείνω*.

idg. **ghéros*: ved. *háras*, heat, gr. *θέρω*.

idg. **-qiti-s*: skr. *ápa-citi-s*, reward, homage, punishment, gr. *ἀπό-τισις*, *τισις*.

idg. **qid*: skr. *cid*, -cunque, gr. *τί*, lat. *quid*.

idg. **kuki-s*: skr. *śúci-s*, light, clear, pure, cf. *śukrá-s*, clear, bright.

idg. **kiéuetai*: skr. *cyávate*, moves, falls, cf. gr. *σεύω*.

Instances of gutturals, which were not followed by *ǣ̃*, *ǣ̃̃*, *ǣ̃̃̃* and therefore remained unchanged:

idg. **kakūd-*: skr. *kakút* (*d*), *kakúdmān* (*nt*), top, summit, lat. *cacūmen* (from **cacūdmēn*).

idg. **kark-*: skr. *karká-s*, *karkāṭa-s*, crab, gr. *καρκίνος*, lat. *cancer* (from **carcer* or **carcen*).

idg. **skandō*: skr. *skándāmi*, I spring, lat. *scandō*.

idg. **kālo-s*: skr. *kāla-s*, dark, black, cf. gr. *κηλῖς* (**kālís*), spot, *κηλάς* (**kālás*), „νεφέλη ἄνυδρος καὶ χειμερινὴ ἡμέρα”, lat. *cāligo*, mist, darkness.

idg. **kāru-s*: ved. *kārú-ṣ*, praiser, singer, cf. gr. *κήρυξ*, dor. *κᾶρυξ*.

idg. **qásetai*: skr. *kásate*, coughs, cf. ags. *hwósta*, dutch *hoest*. That the radical vowel was *ā* (not *ō*), is seen from lith. *kosėti*, to cough.

idg. **égāt*: skr. *ágāt*, went, gr. *ἔβη*, dor. *ἔβᾱ*.

idg. **gotero-s*: skr. *katará-s*, who (from two), gr. *πότερος*, ion. *κότερος*, goth. *hwaþar*.

idg. **kókso-s*, **kóksā*: skr. *kákṣa-s*, region of the girth, girdle &c., underwood, *kákṣā*, girdle, circular wall, lat. *coxa*, mhg. *hahse*.

idg. **jugó-m*: skr. *yugá-m*, yoke, age, gr. *ζυγόν*, lat. *jugum*, goth. *juk*.

idg. **ghono-s*: skr. *ghaná-s*, slayer (ved.), compact &c., gr. *Φόνος*: skr. *hánmi*, I slay, gr. *θείνω*.

idg. **dəlghó-s*: skr. *dīrghá-s*, long, cf. gr. *δολιχός*.

idg. **gōu-s*: skr. *gáu-ṣ*, cow, gr. *βοῦς* &c.

idg. **garú-s*: skr. *gurú-ṣ*, heavy, important, worthy of honor, cf. gr. *βαρύς*, goth. *kaúrus* and lat. *gravis*.

idg. **garí-s*: skr. *girí-ṣ*, mountain, cf. lith. *giria*, forest, oslav. *gora*, mountain.

idg. **gntó-s*: skr. *gatá-s*, gone, gr. *βατός*, lat. *-ventus*.

idg. **ǵéqr-t*: skr. *yákṛt* (**yákṛt*, cf. avest. *yākarē*), liver, gr. *ἥπαρ*, lat. *jecur*.

idg. **kréuəs*: ved. *kravís*, raw flesh, gr. *κρέας*, cf. lat. *cruor* and ags. *hréa*, icel. *hrár*.

idg. **kukró-s*, **kukló-s*: skr. *çukrá-s* (very common in Vedic),

çuklā-s, clear, bright, white, cf. comparat. *çócīyān* (*ms*) and *çúci-s*, light, clear, pure.

idg. **ugró-s*: skr. *ugrá-s*, mighty, terrible, cf. comparat. *ójiyān* (*ms*), akin to lat. *augeō*, goth. *aukan* &c.

idg. **stighnutai*: skr. *stighnuté*, ascends (Dhātup. *āskandane*), cf. gr. *στειχω*, goth. *steiga*.

idg. **peñqti-s*: skr. *pañktí-s*, row of five, row, cf. gr. *πέμπτος*.

idg. **siséqti*: ved. *síṣakti*, follows, accompanies, cf. *sácate*, gr. *ἑπεται*, lat. *sequitur*.

§ 54. **Idg. q, k.** In Aryan the idg. *q* and *k* have fallen together. Before palatal vowels and the semivowel *i* they were palatalized, in all other cases they are represented by *k*.

Instances of idg. *q, k*, skr. *k*:

idg. **qásetai*: skr. *kásate*, coughs, cf. ags. *hwósta*.

idg. **qotero-s*: skr. *katará-s*, who (from two), gr. *πότερος*, ion. *κότερος*, goth. *hwapar*.

idg. **jéqr-t*: skr. *yákrt* (**yákrt*), gr. *ἥπαρ*, lat. *jecur*.

idg. **peñqti-s*: skr. *pañktí-s*, row of five, row, cf. gr. *πέμπτος*.

idg. **kakñd-*: skr. *kakút* (*d*), *kakúdmān* (*nt*), top, summit, lat. *cacūmen*.

idg. **kark-*: skr. *karká-s*, *karkaṭa-s*, crab, gr. *καρκίνος*, lat. *cancer*.

idg. **kókso-s*, **kóksā*: skr. *kákṣa-s*, region of the girth &c., *kákṣā*, girdle, circular wall, lat. *coxa*, mhg. *hahse*.

idg. **kréyas*: ved. *kravís*, raw flesh, gr. *κρέας*, cf. lat. *cruor* &c.

Instances of idg. *q, k*, skr. *c*:

idg. **qeru-s*: skr. *carú-s*, kettle, pot, icel. *hverr*.

idg. **qetwōres*: skr. *catvāras*, four, goth. *fidwōr*, cf. gr. *τέσσαρες*, lat. *quatuor*.

idg. **péñqe*: skr. *pāñca*, five, gr. *πέντε*, lat. *quinque*, goth. *fimf*.

idg. **qid*: skr. *cīd*, -cunque, gr. *τί*, lat. *quid*.

idg. **léuketai*: skr. *rócate*, shines, pleases, cf. gr. *λευκός*, lat. *lūcet*, goth. *liuhap*.

idg. **kūki-s*: skr. *śúci-s*, light, clear, pure, cf. *śukrá-s*, bright, light, clear.

idg. **kīéuetai*: skr. *cyávate*, moves, falls, cf. gr. *σεύω*.

§ 55. **Idg. qh, kh.** Certain examples of idg. *qh*, *kh* are very rare:

idg. **sqhalō*: skr. *skhálāmi*, I stumble, cf. gr. *σφάλλω* (**sqhlō*)?

idg. **kōṁkho-s*: skr. *śaṁkhá-s*, shell, gr. *κόγχος*, cf. lat. *congius*.

Instances of skr. *kh*, iran. *χ*:

skr. *khára-*, ass, avest. *χara-*.

skr. *khá-s*, well, avest. *χan-*, *χāo*.

skr. *sákhā*, friend, avest. *haχa*.

In skr. *kumbhá-*, pot, the initial *k* was originally aspirated, cf. avest. *χumba-*. The loss of the *h* was caused by dissimilation.

Concerning the combination *cch* (*ch*) it is not yet certain, whether it should be explained from idg. *skh* before palatal vowels or from idg. *sḱh*. In the former case *gáčchāmi*, *icchāmi*, *prēcchāmi* would have *cch* by analogy, because idg. **gm̥skhō*, **iṣskhō*, **pr̥ḱskhō* would have given **gaskhāmi*, **iṣkhāmi*, **pr̥ṣkhāmi*; the *cch* of *gáčchatī*, *icchāti*, *prēcchāti* regularly would represent the idg. *skh* before idg. *e*: idg. **gm̥skhēti*, **iṣskhēti*, **pr̥ḱskhēti*. In the latter case *gáčchāmi*, *icchāmi*, *prēcchāmi* also would be organic forms. Cf. on this question Zubatý, Kuhn's Zeitschr. 31, 9 sqq. and Bartholomae, Studien zur idg. sprachgeschichte 2, 3 sqq. Instances:

skr. *chinádmi*, I cut off, cf. avest. *sid-* (*s* from *sḱ*), gr. *σχίζω*, lat. *scindō*, lith. *skėdžiu* (lith. idg. *sk*).

skr. *chāyā*, shade, shadow, cf. pers. *sāya* (*s* from *ś*), gr. *σκιᾶ*, oslav. *stěň* from **sčěň*, **skěň* (slav. idg. *sk*).

skr. *icchāti*, wishes, cf. avest. *isaiti* (*s* from *ś*), lith. *jėszkoti*, oslav. *iskati* (lith. *szk*, slav. *sk*, idg. *sk*), ohg. *eiscōn*.

skr. *gacchati*, goes, cf. avest. *jasaiti* (*s* from *ś*), gr. *βάσκω*.

skr. *pricchāti*, asks, cf. avest. *pērēsaiti* (*s* from *ś*), lat. *poscō*, ohg. *forscōn*.

§ 56. **Idg. *g*, *g*.** In Aryan the idg. *g* and *g* have fallen together. Before palatal vowels and the semivowel *i* they were palatalized, in all other cases they are represented by *g*.

Instances of idg. *g*, *g*, skr. *g*:

idg. **gōu-s*: skr. *gāu-s*, cow, gr. *βοῦς* &c.

idg. **garú-s*: skr. *gurú-s*, heavy, cf. gr. *βαρύς*, goth. *kaúrus* (and lat. *gravis*).

idg. **égāt*: skr. *ágāt*, went, gr. *ἔβη*.

idg. **gntó-s*: skr. *gatá-s*, gone, gr. *βατός*, lat. *-ventus*.

idg. **jugó-m*: skr. *yugá-m*, yoke, age, gr. *ζυγόν*, lat. *jugum*, goth. *juk*.

idg. **ugró-s*: skr. *ugrá-s*, mighty, terrible, cf. lat. *augeō*, goth. *aukan*.

Instances of idg. *g*, *g*, skr. *j*:

idg. **géretai*: ved. *járate*, crackles, invokes, cf. obg. *quirit*.

idg. **auges-*: skr. *ójas-*, strength, power, cf. *ugrá-s*, mighty, terrible, lat. *augeō*, goth. *aukan*.

§ 57. **Idg. *gh*, *gh*.** In Aryan the idg. *gh* and *gh* have fallen together. Before palatal vowels and the semivowel *i* they became *jh*, in all other cases they are represented by *gh*. In Indian *jh* became *h*.

Instances of idg. *gh*, *gh*, skr. *gh*:

idg. **ghono-s*: skr. *ghaná-s*, slayer (ved.), compact &c., gr. *Φόνος*, cf. ohg. *gundea*, ags. *gúð*.

idg. **dālghó-s*: skr. *dīrghá-s*, long, cf. gr. *δολιχός*.

idg. **stighnutai*: skr. *stighnuté*, ascends, cf. gr. *στείχω*,
goth. *steiga*.

Instances of idg. *gh*, *gh*, skr. *h*:

idg. **ghénmi*: skr. *hánmi*, I slay, cf. gr. *θείνω*.

idg. **ghéros*: ved. *háras*, heat, gr. *θέρω*.

idg. **dhrughes*: ved. *drúhas*, harming spirits, cf. skr. *drúh-yāmi*, I harm, avest. *druj-*, ohg. *triogan*.

When followed by an aspirate, *gh* (*jh*) lost its aspiration:

idg. **gh_hdhīō*: skr. *g_hdhīyāmi*, I am eager, cf. goth. *grēdus*,
grēdags.

idg. **gheghóna*: skr. *jaghána*, I have slain: *hánmi*, I slay,
gr. *θείνω*.

Idg. *gh* + *t* and *gh* + *t* are represented by *gdh*: see § 49.

Palatal explosives.

§ 58. **General remarks.** Besides the velars and middle gutturals there was a third series of guttural explosives, formed at the foremost part of the hard palate. These foremost gutturals are called palatals. In Aryan, Armenian, Phrygian-Thracian, Albanian and Balto-Slavonic the palatal explosives were changed to palatal spirants: in the same dialect-groups the velars and middle gutturals fell together into one series of guttural explosives. In Greek, Italic, Germanic and Celtic, where the velars were labialized, the palatals fell together with the middle gutturals. According to the manner, in which the gutturals were treated, the Indogermanic languages may be divided into two groups, a western, where the difference between palatals and middle gutturals has been effaced, and an eastern, where the velars have fallen together with the middle gutturals, but where the palatal explosives have become

spirants. Von Bradke has called the western group that of the *centum*-languages, the eastern group that of the *satəm*-languages. It may be supposed, that the *centum*-languages descend from an other dialect of the mother-tongue than the *satəm*-languages. Cf. von Bradke, Ueber methode und ergebnisse der arischen alterthumswissenschaft (Giessen 1890), 63.

§ 59. Idg. *k̂*. During the Aryan period the idg. *k̂* became *ç*. This voiceless palatal spirant remained unchanged in Indian:

idg. **k̂mtó-m*: skr. *çatá-m*, hundred, gr. *ἑκατόν*, lat. *centum*, goth. *hund*, lith. *szimtas* (cf. § 18).

idg. **k̂aṅkú-s*: skr. *çaṅkú-s*, wedge, stake, oslav. *sqkŭ*, branch, cf. skr. *çákhā*, branch, lith. *szaka* (also goth. *hōha*?).

idg. **k̂énsō*: skr. *çáṁsāmi*, I recite, I praise, I announce, cf. lat. *censeō*.

idg. **k̂ūro-s*: skr. *çūra-s*, mighty, bold, hero, gr. *-κῦρος* in *ἄ-κῦρος*, not valid.

idg. **k̂uó(n)*: skr. *çvā (n)*, dog, lith. *szũ*, with *n* gr. *κύων*, cf. goth. *hunds*.

idg. **suekuro-s*: skr. *çvāçura-s*, father in law, gr. *ἐκυρός*, cf. lat. *socer* and goth. *swaíhra*. Oslav. *svekrŭ* has idg. *k* or *q*; on the contrary lith. *szeszuras* regularly has *sz* from *k̂*. The feminine of **suekuro-s* is **suekrŭ-s*: skr. *çvaçrŭ-s*, mother in law, lat. *socrus*, oslav. *svekry* (with *k* as *svekrŭ*), cf. gr. *ἐκυρά* (probably an analogous formation to *ἐκυρός*) and goth. *swaíhrō*.

idg. **uóikō-s*: skr. *veça-s*, house, gr. *οἶκος*, lat. *vīcus*, cf. goth. *weihs*.

idg. **d̂ṇk̂ó*: skr. *dāçāmi*, I bite, cf. gr. *δάκνω* (also ohg. *zangar*, sharp).

idg. **ákr̂u*: skr. *áçru*, tear, cf. *açrá-m* (of course to be written with *ç*, not with *s*), tear, lith. *aszara* (with an initial *d* gr. *δάκρυ*, lat. *lacruma*, goth. *tagr*).

idg. **aġmō(n)*: ved. *áçmā* (*n*), stone, gr. *ἄκμων*, lith. pl. tantum *aszmens*, edge, but with *k* or *q* lith. *akmũ*, oslav. *kamy*, stone (cf. ohg. *hamar*, icel. *hamarr*, originally, „a weapon of stone”?).

idg. **dedórġa*: skr. *dadárġa*, I have seen, gr. *δέδορκα*.

The idg. combination *ġt* regularly became *çt* in Aryan, that is represented in Indian by *ṣt*:

idg. **oġtō(u)*: skr. *aṣṭá* (ved.), *aṣṭáu*, eight, gr. *ὀκτώ*, lat. *octō*, goth. *ahtau*.

idg. **diġti-s*: skr. *diṣṭi-s*, indication, prescription, destiny, ohg. *-ziht* in *inziht*, accusation, cf. lat. *dictiō* and with strong vocalism gr. *δείξις*.

idg. **uġéġti*: skr. *váṣṭi*, is willing, cf. *uçánt-*, willing, gr. *ἑκών*. The first person is *váçmi* from **uġéġmi*.

Brugmann 1, 299 assumes, that *sġ* became *cçh* (*ch*) in Indian: cf. however § 55 and § 62.

The idg. combination *ġs* is represented by *kṣ*:

idg. **uġéġsi*: skr. *vákṣi*, thou art willing, cf. *váçmi*, I am willing, gr. *ἑκών*.

idg. **déġsino-s*: skr. *dákṣiṇa-s*, right, southern, clever, able, oslav. *desiñũ*, lith. *deszinė* (fem. of the *ė*-class, right hand), cf. gr. *δεξιός*, lat. *dexter*, goth. *taíhswa*.

§ 60. **Idg. ġ.** During the Aryan period the idg. *ġ* became a voiced palatal spirant (*ǵ*), which was changed in Indian to an affricate (*dṣ*, written *j*):

idg. **ġénos*: ved. *jánas*, race, family, gr. *γένος*, lat. *genus*, cf. goth. *kuni*: skr. *janáyāmi*, I beget, I produce, gr. *γίγνομαι*, lat. *gignō* &c. Avest. *zan-* proves, that the *j* of *janáyāmi* is an idg. *ġ*.

idg. **ġōnu*: skr. *jānu*, knee, cf. gr. *γόνυ*, lat. *genu* and with loss of the root-vowel ved. *jñu-* in *jñu-bádġh-*, bending

the knees, gr. γυυ- in γυυπετεῖν, goth. *kniu*. Avest. *zanva*, knees.

idg. **ġnōtós*: skr. *jñātá-s*, known, gr. γνωτός, lat. *nōtus*: skr. *jānāmi*, I know, gr. γιγνώσκω, lat. *nōscō* (*gnōscō*), cf. ags. *cnáwan*, ohg. *chnāan* (with idg. *e*) and ohg. *einchnuadil*, *cnuodelen*. That we have to do with idg. *ġ*, appears from lith. *žinoti*, oslav. *znati* &c.

idg. **ġusō*: skr. *juṣāmi*, I take pleasure, I relish, cf. idg. **ġéusō*, gr. γεύω, goth. *kiusa* and idg. **ġustu-s*, lat. *gustus*, goth. *kustus*. Avest. *zaoša-* (= skr. *jóṣa-*), wish.

idg. **bhærġo-s*: skr. *bhūrja-s*, birch, cf. ohg. *pirihha*. The *ġ* appears from oslav. *brěza*, lith. *beržas*.

idg. **mġġō*: skr. *mṛjāmi*, I rub, wipe, strip, cf. gr. ἀμέλω, lat. *mulgeō*, ohg. *milchu* &c. Lith. *melžu*, oslav. *mlŭza* prove, that we have *ġ*.

The idg. combination *ġb(h)* regularly became in Aryan *žb(h)*, from which skr. *ḍb(h)*: cf. § 63. Example:

idg. **viġbhís*: skr. *viḍbhís*, instrum. pl. of *viç-*, nom. *viṭ*, settlement, community, clan, tribe, people, cf. gr. οἶκος, lat. *vicus* &c.

§ 61. Idg. *ġh*. During the Aryan period the idg. *ġh* became *žh*. This aspirated spirant is in general represented by skr. *h*. The intermediate *jh* is preserved in skr. *ujjhitá-s*, left, from **ud-jhita-s*: *jáhāmi*, I leave (*ujjhāmi* has been formed by analogy). Instances of idg. *ġh*, skr. *h*:

idg. **ġhéimen-*: ved. *hēman-*, winter, gr. χειμα, χειμών, cf. skr. *himá-m*, snow, gr. χιών, lat. *hiems*. The *ġh* appears from lith. *žëma*, oslav. *zima* &c.

idg. **ġhansó-s*: skr. *haṁsá-s*, goose, swan, cf. gr. χήν, lat. *anser*, ohg. *gans*. Lith. *žąsis* proves, that we have *ġh*; surprising is the *g* of oslav. *gąsň* (perhaps an ancient loan from Germanic).

idg. **léiǵhmi*: skr. *léhmi*, I lick, cf. gr. *λείχω*, lat. *lingō*, goth. *-laigōn*. The *ǵh* appears from lith. *lėžiū*, oslav. *ližq* &c.

idg. **bhāǵhu-s*: skr. *bāhú-s*, arm, gr. *πῆχυς*, ohg. *buog*. Avest. *bāzu-*.

idg. **uég̃hō*: skr. *váhāmi*, I carry, lat. *vehō*, goth. *-wiga*. Lith. *vežu*, oslav. *vezq* &c. prove, that we have to do with *ǵh*.

Idg. *ǵh* + *t* became skr. *ḍh*, sometimes with modification of a preceding vowel:

idg. **léiǵh-ti*: skr. *léḍhi*, licks, cf. gr. *λείχω*.

idg. **liǵh-tós*: skr. *liḍhá-s*, licked: *léḍhi*.

idg. **uǵh-tó-s*: skr. *ūḍhá-s*, carried: *váhāmi*, I carry.

idg. **dhr̥ǵh-tó-s*: skr. *dr̥ḍhá-s*, firm: *d̥r̥hyāmi*, *d̥r̥m̐hāmi*, I make firm.

idg. **sēǵh-tó-s*: skr. *sāḍhá-s*, overpowered &c.: *sáhāmi*, I overpower, I withstand &c., gr. *ῥίχω*.

idg. **uég̃h-tum*: skr. *vóḍhum*, to carry: *váhāmi*, I carry.

idg. **sēǵh-tum*: skr. *sóḍhum*, to withstand &c.: *sáhāmi*, I withstand &c.

When followed by an aspirate, *ǵh* became *j*:

idg. **ǵhiǵhāmi*: skr. *jáhāmi*, I leave. The *i* of the reduplication-syllable was replaced by *a* before the end of the Aryan period, cf. avest. *zazāiti*, leaves.

Spirants.

§ 62. **Idg. s.** In general the idg. *s* remained unchanged:

idg. **septn̥*: skr. *saptá*, seven, gr. *ἑπτά*, lat. *septem*, cf. goth. *sibun*. Lith. *septyni* proves, that we have to do with *n̥*, not with *ṃ*.

idg. **séno-s*: ved. *sána-s*, old, gr. fem. *ἔνη*, cf. lat. *senex*, goth. *sineigs*.

idg. **sréuō*: skr. *srávāmi*, I flow, I stream, gr. *ῥέω*, cf. ohg. *stroum*.

idg. **véstai*: skr. *vāste*, clothes one's self, puts on, cf. *vāsana-m*, *vāstra-m*, garment, gr. *ἔννυμι*, *ἔνδος*, *ἔσθής*, lat. *vestis*, goth. *wasjan*, *wasti*.

idg. **dōsiō*: skr. *dāsyāmi*, gr. *δώσω*.

idg. **gēnos*, gen. **gēnesos*: ved. *jānas*, gen. *jānasas*, race, family, gr. *γένος*, lat. *genus*.

idg. **ékhuo-s*: skr. *ácva-s*, horse, gr. *ἵππος*, lat. *equus*, germ. **éχwoz*, icel. *jór*, ags. *eoh*.

Already during the Aryan period *s* was changed to *ś* after *ī*, *ū*, *ṛ*, *ṡ*, *ṣ*, *r*, *q*, *k*, *ḱ*. In the same conditions *ss* became *śś*. In Indian the *ś* is lingualized and *śś* has become *kṣ* (cf. however Wackernagel 1, 137). I can not agree with Hirt (Idg. forschungen 4, 44), Zubatý (Arch. f. slav. phil. 16, 404 note), Pedersen (Idg. forschungen 5, 33 sqq.) and Wackernagel 1, 231, who assume a connection between the Aryan change of *s* to *ś* and the Slavonic transition of *s* to *ch* (see Arch. f. slav. phil. 16, 368 sqq.; Museum 4, 50).

idg. **sthithāmi*: skr. *tísthāmi*, I stand, gr. *ἵστημι*, cf. lat. *sistō*.

idg. **ustó-s*: skr. *uṣṭá-s*, burned, lat. *ustus*.

idg. **ulqoisu*: skr. *vṛkeṣu*, loc. plur. of *vṛka-s*, wolf, oslav. *vlŭcéchŭ*.

idg. **geuster-*: ved. *jostár-*, *jóstar-*, loving, cf. gr. *γευστήριον*.

idg. **duéissi*: skr. *dvéḱṣi* (from **dváṛśṣi*), thou hatest, 2 pers. of *dvéṣmi*.

idg. **saussīō*: skr. *ṣokṣyāmi* (from **saṁśśyāmi*), I shall dry up, gr. *αὔσω*.

idg. **dhṛsnéumi*, **dhérsō*: skr. *dhṛṣṇómi*, *dhárṣāmi*, I dare, cf. gr. *θαρρέω* &c.

idg. **k̑ars-*: skr. *çīrṣá-m*, *çīrṣán-*, head, cf. *çíras*, head, gr. *κόρση* (*κόρρη*), *κέρς*, *κάρᾱ*, lat. *cerebrum*, *cernuus*, icel. *hjarne*, *hjarse*, ohg. *hirni*.

idg. **ȗersā*: skr. *varṣā*, rain, gr. *ἔρση*, *ἔρση*.

idg. **ueq̑s̑ō*: skr. *vakṣyāmi*, I shall say: *vácmi*, I say, cf. *vāk*, voice, lat. *vōx* &c.

idg. **dheks̑ō*: skr. *dhakṣyāmi*, I shall burn: *dáhāmi*, I burn, lith. *degu*, cf. goth. *dagis*.

idg. **ȗéksi*: skr. *vákṣi*, thou art willing, cf. *vácmi*, I am willing, gr. *ἐκῶν*.

It is to be noticed, that skr. *ṣ* was turned back into *s*, when immediately followed by *ṛ* or *r*:

idg. **tisres*, **tisṛ̑bhis* &c.: skr. *tisrás*, fem. three, instrum. *tisṛ̑bhiṣ*, cf. avest. *tišarō*, irish *teora*.

Brugmann 1, 412 and Bartholomae (Studien zur idg. sprachgeschichte 2, 5) assume, that the idg. *sq*, *sk* before palatal vowels became *çc* in Aryan, cf. ved. *paçcā*, behind, later, west, avest. *pasca* (originally an instrumental, ending in idg. *ē*). Against this opinion Meillet, Mém. de la Soc. de Ling. 9, 375 sq.

It would seem, that the idg. *sqh*, *skh* before palatal vowels are represented in Indian by *cch* (*ch*), but Bartholomae (Studien zur idg. sprachgeschichte 2, 3 sqq.) has tried to prove, that *cch* (*ch*) goes back on a combination of *k̑*. Cf. § 55, where examples of *cch* are given.

The idg. *ss* after *a*-vowels became *ts* in Indian. In most cases however *ss* had been simplified before the end of the Indogermanic period, cf. skr. *ási*, thou art, avest. *ahi*, gr. *ἄϊ*, idg. **ési* from **és-si*. Instances of idg. *ss*, skr. *ts*:

idg. **vess̑ō*: skr. *vatsyāmi*, I shall put on, gr. *ἔσσω*, fut. of idg. **ves-*.

idg. **yessjō*: skr. *vatsyāmi*, I shall dwell, fut. of *vāsāmi*, I dwell, goth. *wisan*.

idg. **yidyléssu*: skr. *vidvátsu*, loc. pl. of *vidván*, knowing, wise, cf. gr. *εἰδώς* and goth. *weitwōps*.

Between explosives *s* was lost: *utthátum*, to stand up, to rise up, from **utsthátum* (*ud* + *sthátum*); *útāpta*, you were warm, from **átāpsta* (aor. of *tápāmi*).

In the neighbourhood of *ç* and *ş* the idg. *s* became assimilated to *ç*:

idg. **syekūro-s*: skr. *çvácūra-s*, father in law, gr. *ἐκυρός*, cf. with a similar assimilation lith. *szeszuras*.

idg. **smak̐ru*: skr. *çmácru*, beard, cf. lith. *smakra*, chin (with idg. *k*), and perhaps lat. *maxilla*.

idg. **suskó-s*: skr. *çuşká-s*, dry, avest. *huška-*, cf. lith. *sausas*, oslav. *suchǎ*, ohg. *sōr*.

idg. **kasó-s*: skr. *çaçá-s*, hare, cf. ohg. *haso*, ags. *hara*, opruss. *sasnis*.

§ 63. **Idg. z.** Osthoff (Kuhn's Zeitschr. 23, 87—89) has proved, that during the Indogermanic period *s* before voiced consonants had become voiced. In Aryan this voiced sibilant (*z*) was preserved after *a*-vowels, but changed to *ž* after *i*, *ū*, *ī*, *u*. In Indian the *ž* became lingual. Afterwards it disappeared in any position, (as well as the unchanged *z*.)

Idg. *azd(h)*, *ezd(h)*, *ozd(h)* = ar. *azd(h)* = skr. *ed(h)*:

idg. **sezdižet*: ved. *sedyát*, 3 pers. sing. optat. perf. of the root *sad-*, to sit, avest. *hazdyāp*.

idg. **ezdhí*, **zdhi*: skr. *edhí*, imperat. of the root *as-*, to be, avest. *zdi*, cf. gr. *ἴσθι*.

Idg. *āzd(h)*, *ēzd(h)*, *ōzd(h)* = ar. *āzd(h)* = skr. *ād(h)*:

idg. **ēzdhuaḡ*: skr. *ádhive*, you sit, cf. *áste*, sits, gr. *ἵσται*.

idg. **kāzdhí*: skr. *çādhí*, imperat. of the root *çās-*, to rule, to punish &c.

Idg. *zd(h)* after *ī*, *ū*, *ṛ*, *ṛ* = ar. *zd(h)* = skr. *ḍ(h)*:

idg. **nīzdó-s*: skr. *nīḍá-s*, nest, lat. *nīdus*, ohg. *nest*.

idg. **duzdēk-*: ved. *dūdāç-*, not pious, cf. skr. *duṣ-*, gr. *δυς-*, goth. *tuz-*.

idg. **éstauzdhyam*: ved. *ástoḍhvam*, 2 pers. plur. aor. med. of *stáumi*, I praise.

Idg. *zb(h)* after *a*-vowels = ar. *zb(h)* = skr. *ḍb(h)*:

idg. **viduezbhis*: skr. *vidvādbhis*, instrum. pl. of *vidván*, knowing.

idg. **mēzbhis*: ved. *mādbhis*, instrum. pl. of *mās*, moon, month.

Idg. *zb(h)* after *ī*, *ū*, *ṛ*, *ṛ* = ar. *zb(h)* = *ḍb(h)*:

idg. **duizbhis*: skr. *dvidbhis*, instrum. pl. of *dviṣ-*, nom. *dvit*, hating.

idg. **vipruzbhis*: skr. *viprūdbhis*, instrum. pl. of *viprús-*, nom. *viprūt*, crumb, spot, spark.

Idg. *zg(h)* after *a*-vowels, not followed by a palatal vowel or *ṛ*, = ar. *zg(h)* = skr. *dg(h)*:

idg. **mezgú-s*: skr. *madgú-ṣ*, a kind of waterfowl, cf. lat. *mergus*: skr. *mājjiati*, see below.

Idg. *zg* after *a*-vowels, followed by a palatal vowel, = ar. *zj* (*zdž*) = skr. *jj*:

idg. **mézgeti*: skr. *mājjiati*, sinks under, dives, lat. *mergit*.

Between explosives *z* is lost in Indian: ved. *ámugdhvam* from **ámugzdhvam*, 2 pers. pl. aor. med. of *muñcáti*, releases, loosens.

§ 64. **Idg. j.** The idg. spirant *j* has fallen together with the semivowel *ṛ* in all Indogermanic languages except Greek:

idg. **jugó-m*: skr. *yugá-m*, yoke, gr. *ζυγόν*, lat. *jugum*, goth. *juk*.

idg. **jésō*: skr. *yāsāmi* (the common form in literature is *yāsyāmi*), I seethe, I boil, gr. *ζέω*, cf. ohg. *jesan*.

idg. **jéyo-s*: skr. *yáva-s*, corn, barley, cf. gr. *ζειαί*, spelt, lith. *javai*, corn.

idg. **jūs-*: ved. *yūṣ-*, *yūṣán-*, skr. *yūṣa-s*, *yūṣa-m*, broth, lat. *jūs*, oslav. *jucha*, cf. gr. *ζύμη*.

Perhaps also:

idg. **hējtaĩ*: skr. *çéte*, lies, gr. *κεῖται*.

idg. **tjeg-*: skr. *tyájāmi*, I leave, *tyaktá-s*, left, gr. *σέβομαι*, *σεπτός*.

See Brugmann 1, 454. If *çéte* and *tyájāmi* originally contained the semivowel *j*, a gradation *çe-*: **çi-*, *tyaj-*: **tij-* might have been expected.

§ 65. **Idg. v.** The mother-language seems to have possessed a spirant *v*, which already in Aryan had fallen together with the semivowel *u*. The most certain criterion of idg. *v* is the absence of weaker forms containing *u* (Brugmann, 1, 409). Instance:

idg. **véstai*: skr. *váste*, clothes one's self, puts on, cf. *vāsana-m*, *vásma* (*n*), *vástra-m*, garment, gr. *ἔννυμι*, *ἔανός*, *ἔῖμα* (lesb. *ρέμμα*), *ἔσθής*, lat. *vestis*, *vestiō*, goth. *wasjan*, *wasti*.

§ 66. **Idg. γ.** Von Fierlinger (Kuhn's Zeitschr. 27, 478 note) supposes, that there was a voiced palatal spirant *γ* in the mother-language, represented by skr. *h*, avest. *z*, gr. *γ*, lat. *g*, germ. *k*. Though this theory may not claim a high degree of probability, it will be useful to mention the few cases, where skr. *h* seems to correspond to gr. *γ* &c.:

idg. **γένu-s*: skr. *hānu-ṣ*, jaw, gr. *γένυς*, cf. goth. *kinnus* and lat. *gena*.

idg. **γε*: skr. *ha*, enclit. particle, gr. *γε*, goth. *-k* in *mik*, *puk*, *sik*.

idg. **γosto-s*, **əγosto-s*: skr. *hástā-s*, hand, trunk (of an elephant), paw &c., gr. *ἄγαστός* (see de Saussure 53).

idg. **eγōm*: skr. *ahám*, I, gr. *ἐγών*, cf. gr. *ἐγώ*, lat. *ego*, goth. *ik*.

idg. **dhuyatē(r)*: skr. *duhitā* (*r*), daughter, gr. *θυγάτηρ*, cf. goth. *daúhtar*.

idg. **gūγ-*: skr. *gūhāmi*, I hide, cf. Ὠγυγία, Ὠγυγος, Γύγης.

idg. **mēγ-*: skr. *mahān* (*nt*), great, cf. ved. *máhi*, nom. acc. neutr. great, adv. very, subst. greatness, gr. *μέγα* (idg. **mégə*).

§ 67. Idg. *p*, *ḍ*. In general skr. *kṣ* corresponds to gr. *ξ*, but in some cases we find gr. *κτ*, *χθ* or *φθ* instead of *ξ*. We must assume, that the skr. *ṣ*, which is represented by gr. *τ*, *θ*, goes back on dental sounds, which were different from *s* and from the ordinary idg. dental explosives. Perhaps these dental sounds were spirants (*p*, *ḍ*). See Brugmann 1, 409 sq. and Kretschmer, Kuhn's Zeitschr. 31, 429 sqq.

Instances of skr. *kṣ*, gr. *κτ*, idg. *kṑ*, *kṑ*:

ved. *kṣémi*, I dwell, skr. *kṣétra-m*, field, *kṣítī-ṣ*, dwelling, abode, earth, ved. pl. tribes, gr. rhod. *κτοίνα*, dwelling-place, gr. *κτιζω*, *κτίσις*, *ἀμφικτιλones*, *ἐϋκτίμενος*. Avest. *ṣaeiti* proves, that the initial guttural was *k̐*.

ved. *kṣáyāmi*, I possess, gr. *κτάομαι*, *κτῆμα*. Avest. *ṣāyeiti* proves, that the original *anlaut* was *k*.

skr. *kṣaṇómi*, I hurt, gr. *κτείνω*. Oper. -*ṣata-* = skr. *kṣatá-*.

skr. *ṛkṣa-s*, bear, gr. *ἄρκτος*, lat. *ursus*. Avest. *arēša-* (?).

skr. *tákṣā* (*n*), carpenter, gr. *τέκτων*, cf. lat. *texere*. Avest. *taš-*.

Instance of skr. *kṣ*, gr. *φθ*, idg. *qṑh*:

skr. *kṣiṇāmi* (ved.), later *kṣiṇómi*, *kṣáyāmi*, I destroy, *kṣítī-ṣ*, destruction, gr. *φθίνω*, *φθίσις*. Avest. *ṣāya-* proves, that

skr. *kṣ*, gr. $\Phi\theta$ here goes back on a combination of voiceless consonants.

Instances of skr. *kṣ*, gr. $\chi\theta$, $\Phi\theta$, idg. *ǵd̥h*, *ǵd̥h*:

ved. *kṣā́-s*, dwelling-place, earth, pl. *kṣā́mas*, gr. $\chi\theta\acute{\omega}\nu$, cf. gr. $\chi\alpha\mu\acute{\alpha}\iota$, lat. *humus*, avest. *zēm-*, lith. *žemė*, oslav. *zemlja*, which prove, that skr. *kṣ*, gr. $\chi\theta$ here represents an idg. combination of voiced consonants.

skr. *kṣárāmi*, I flow, melt away, perish, gr. $\Phi\theta\epsilon\acute{\iota}\rho\omega$. Avest. *γžaraiti* proves, that the initial group of consonants was originally voiced.

B. THE RELATION OF THE INDIAN CONSONANTS TO THE INDOGERMANIC.

Semivowels.

§ 68. **Skr. y.** In skr. *y* have fallen together the idg. *ǵ* and *j*.

Skr. *y* = idg. *ǵ*:

skr. *yá-s*, who, gr. $\acute{\omicron}\varsigma$.

skr. *yákṛt*, liver, originally **yákṛt*, gr. $\eta\pi\alpha\rho$, lat. *jecur*.

skr. *tráyas*, three, gr. $\tau\rho\epsilon\acute{\iota}\varsigma$, lat. *trēs*, goth. *preis*.

skr. *mádhyā-s*, middle, gr. $\mu\acute{\epsilon}\sigma\omicron\varsigma$, lat. *medius*, goth. *midjis*.

skr. *jyá*, bowstring, cf. gr. $\beta\acute{\iota}\delta\varsigma$.

Skr. *y* = idg. *j*:

skr. *yugá-m*, yoke, gr. $\zeta\upsilon\gamma\acute{\omicron}\nu$, lat. *jugum*, goth. *juk*.

skr. *yásāmi* (*yásyāmi*), I seethe, I boil, gr. $\zeta\acute{\epsilon}\omega$, cf. ohg. *jesan*.

skr. *yáva-s*, corn, barley, cf. gr. $\zeta\epsilon\iota\acute{\alpha}\iota$, lith. *javai*.

skr. *tyájāmi*, I leave, cf. gr. $\sigma\acute{\epsilon}\beta\omicron\mu\alpha\iota$, $\sigma\epsilon\mu\nu\delta\varsigma$.

§ 69. **Skr. v.** In skr. *v* have fallen together the idg. *u* and *v*.

Skr. *v* = idg. *u*:

skr. *vácas*, word, *vák*, voice, gr. *ἔπος*, lat. *vōx*.

skr. *véda*, I know, gr. *οἶδα*, goth. *wait*.

skr. *veça-s*, house, gr. *οἶκος*, lat. *vīcus*, cf. goth. *weihs*.

skr. *náva-s*, new, gr. *νέος*, lat. *novus*, cf. ved. *návya-s*, goth. *niujis* &c.

skr. *svādú-ṣ*, sweet, gr. *ἡδύς*, cf. lat. *suāvis* and os. *swōti*.

skr. *sárva-s*, all, gr. *ὅλος*, *οὔλος*.

Skr. *v* = idg. *v*:

skr. *váste*, puts on, cf. gr. *ἔννυμι*, *ἔσθής*, lat. *vestis*, goth. *wasjan*.

Nasals.

§ 70. **Skr. m.** Skr. *m* = idg. *m*:

skr. *mātá*, mother, gr. *μήτηρ*, lat. *māter*, ohg. *muoter*.

skr. *mṛti-ṣ*, death, lat. *mors*, cf. goth. *maúrþr*.

skr. *mnāta-s*, mentioned, cf. gr. *μιμνήσκω*.

skr. *mlāyāmi*, I wither, cf. gr. *βλάξ*.

skr. *vámāmi*, *vámimi*, I vomit, cf. gr. *έμέω*, lat. *vomō*.

skr. *smáyate*, smiles, cf. gr. *Φιλομμειδής*, *μειδιάω*, lat. *mīrus*, engl. *smile*.

skr. *gharmá-s*, heat, lat. *formus*, ohg. *warm*, cf. gr. *θερμός*.

ved. *jámbha-s*, set of teeth, tooth, gr. *γόμφος*, ohg. *chamb*.

skr. *tám*, acc. pron., gr. *τόν*, lat. *is-tum*, goth. *þan-a*.

§ 71. **Skr. n.** Skr. *n* = idg. *n*:

skr. *náu-ṣ*, ship, gr. *ναῦς*, cf. lat. *nāvis*, icel. *nó*.

skr. *nábhas*, sky, gr. *νέφος*, cf. gr. *νεφέλη*, lat. *nebula*, ohg. *nebul*.

skr. *nāma* (*n*), name, lat. *nōmen*, cf. gr. *ὄνομα* and goth. *namō*.

ved. *sána-s*, old, gr. fēm. ἔνη, cf. lat. *senex* and goth. *sineigs*.

ved. *vidmāne*, to know, gr. ἴδμεναι.

skr. voc. *tókṣan*, carpenter, gr. τέκτον.

In some cases the skr. *n* goes back on idg. *m*:

ved. *gántu*, 3 pers. sing. imperat. of *gam-*, to go. Idg. *mt* became *nt*.

ved. *dán*, of the house, gr. δεσ- in δεσπότης, cf. ved. *dáma-s*, gr. δόμος &c. At the end of words idg. *ms* became *n*.

§ 72. **Skr. ṇ.** Skr. *ṇ* often goes back on idg. *n*: in most cases the lingualization is due to the influence of neighbouring lingual consonants. In an other group of words *ṇ* is the representative of idg. *ln*.

Skr. *ṇ* = idg. *n*:

skr. *krṣṇá-s*, black, opruss. *kirsna-*.

skr. *uṣṇá-s*, hot: óṣāmi, gr. εὔω, lat. *ūrō*.

ved. *mṛṇámi*, I crush, gr. med. μάρναμαι.

skr. *tṛṇa-m*, grass, cf. goth. *paúrnnus*.

skr. *dvéṣāṇi*, 1 pers. sing. praes. conj. (imperat.) of *dvéṣmi*, I hate.

skr. *krīṇámi*, I buy, cf. gr. ἐπριάμην.

In loans from Prākṛit dialects, not in the neighbourhood of linguals:

skr. *maṇí-ṣ*, jewel, os. *meni*, cf. lat. *monile*.

skr. *bhaṇāmi*, I speak, ved. *bhánāmi*.

Skr. *ṇ* = idg. *ln*:

skr. *kiṇa-s*, callosity, lat. *callus* (*callum*).

skr. *kuṇi-ṣ*, lame of one arm, cf. gr. κυλλός.

skr. *āṇí-ṣ*, the leg immediately above the knee, lynch-pin, cf. gr. ὠλένη, lat. *ulna* and goth. *aleina*.

skr. *pāṇí-ṣ*, hand, cf. gr. παλάμη, lat. *palma*, ags. *folm*.

In loans from Prākṛit dialects *ṇ* may represent the idg. combination *rn*:

skr. *gaṇḍá-s*, troop, cf. gr. ἄγελρω.

§ 73. **Skr. ñ.** Skr. *ṇ* = idg. *ṇ*:

skr. *aṇḱá-s*, lap, hook, gr. ὄγκος, lat. *uncus*.

skr. *bhaṇḱá-s*, wave, cf. lith. *bangā*.

§ 74. **Skr. ñ.** Before palatal affricates, which represent idg. velars or middle gutturals, skr. *ñ* goes back on idg. *ṇ*. Before *j*, idg. *ḡ* the *ñ* is original.

Skr. *ñ* = idg. *ṇ*:

skr. *pāñca*, five, gr. πέντε, lat. *quinque*, goth. *fimf*.

§ 75. **Nasalization of vowels.** The nasalization of vowels is a remainder of idg. nasals. In Sanskrit all nasals before original or secondary spirants were reduced to anusvāra:

skr. *ámśa-s*, shoulder, goth. *ams*, cf. gr. ὤμος and lat. *umerus*.

skr. *haṁśá-s*, goose, swan &c., cf. gr. χήν, ohg. *gans* and lat. *anser*.

skr. *ānāñṇa*, perf. of *aṇnómi*, I attain, *āñṇa-s*, portion, part, cf. gr. ἡνεγκον, lat. *nanciscor*.

ved. *ámhas*, distress, lat. *angus-* in *angustus*, cf. gr. ἄγχω, lat. *angō* and goth. *aggwus*.

Liquids.

§ 76. **Skr. r.** Skr. *r* regularly corresponds to idg. *r*, but in many cases it goes back on idg. *l*.

Skr. *r* = idg. *r*:

skr. *rájyāmi*, I am (get) red, affected with a strong feeling, gr. ῥέζω.

skr. *rā́-s*, riches, wealth, lat. *rēs*.

skr. *rāt* (**rāk* from **rāks*), king, lat. *rēx*.

skr. *bhárāmi*, I bear, gr. Φέρω, lat. *ferō*, goth. *baíra*.

skr. *pári*, around, gr. *πέρι*, lat. *per*, goth. *faír*-.
 skr. *smárāmi*, I remember, cf. lat. *memor*.

skr. voc. *mātar*, mother, gr. *μήτηρ*.

Skr. *r* = idg. *l*:

skr. *rivéca*, I left, gr. *λέλοιπα*, goth. *laihw*.

skr. *rākṣāmi*, I protect, cf. gr. *ἀλέξω*.

ved. *rāmbate*, hangs down, skr. *lāmbate* (already Çat. Br.),
 cf. lat. *lābor*.

ved. *rēhmi*, I lick, skr. *léhmi*, cf. gr. *λείχω*, lat. *lingō*,
 goth. *-laigōn*.

About the relation of the Vedic dialect to Sanskrit (the
 Brāhmaṇa's and the epic poems included) see § 43.

§ 77. **Skr. l.** Skr. *l* regularly corresponds to idg. *l*:

skr. *lāmbate*, hangs down, cf. lat. *lābor*.

skr. *léhmi*, I lick, cf. gr. *λείχω* &c.

skr. *limpāmi*, I smear, cf. gr. *λίπος*, *λιπαρός* &c.

skr. *lúbhyāmi*, I desire, cf. lat. *lubet*, goth. *liufs*.

skr. *álpa-s*, small, cf. lith. *alpnas*, weak.

But we often find skr. *l* = idg. *r* (cf. § 42):

skr. *luñcāmi*, I pull out, I pull off &c., cf. gr. *ὀρύσσω*,
 lat. *runcāre*.

skr. *lumpāmi*, I break, cf. lat. *rumpō*, ags. *réofan*.

Labial explosives.

§ 78. **Skr. p.** Skr. *p* = idg. *p*:

skr. *purás*, in front &c., gr. *πᾶρος*, cf. goth. *faúra*.

skr. *paraçú-ṣ*, axe, gr. *πέλεκυς*, cf. goth. *filhan*.

skr. *píçni-ṣ*, speckled, cf. gr. *περικνός* and perhaps ohg.
forhana.

skr. *parut*, last year, cf. gr. *πέρυσσι*, mhg. *vërt*.

skr. *prá-*, forward, gr. *πρῶ*, goth. *fra-*, cf. lat. *prō(d)*.

skr. *plāvāmi*, I float &c., gr. *πλέω*, cf. lat. *pluit* and ags. *fléotan*.

ved. *nápāt*, descendant, lat. *nepōs*, ohg. *nefo*.

skr. *sárpāmi*, I creep &c., gr. *έρπω*, lat. *serpō*.

§ 79. **Skr. ph.** Skr. *ph* = idg. *ph* (cf. § 46)?

skr. *phéna-s*, foam, cf. oslav. *pěna* and ohg. *feim*.

skr. *phalgu-s*, weak, worthless, useless, cf. gr. *Φελγύνει· ἄσυνετεῖ, ληρεῖ* (Hesych.).

skr. *çaphá-s*, hoof, cf. ohg. *huof*.

§ 80. **Skr. b.** Skr. *b* = idg. *b*:

skr. *bála-m*, strength, power, cf. oslav. *bolij* and lat. *dēbilis*.

skr. *buk-kāra-s*, roar, bellow, cf. gr. *βύκτης, βυκάνη*, lat. *būcina*.

skr. *lāmbate*, hangs down, cf. lat. *lābitur*.

ved. *upa-bdā-s*, stamping, trampling, cf. gr. *ἐπίβδαι*.

In the neighbourhood of a following aspirate *b* often represents idg. *bh*:

skr. *bódhāmi*, I perceive, goth. *biuda*, cf. gr. *πεύθομαι, πυνθάνομαι*.

ved. *budhná-s*, bottom, cf. gr. *πυθμήν, πύνδαξ*, lat. *fundus* and ohg. *bodam*.

In younger texts we often meet with dialectic words, in which *b* is written instead of *v*.

§ 81. **Skr. bh.** Skr. *bh* = idg. *bh*:

skr. *bhárāmi*, I bear, gr. *φέρω*, lat. *ferō*, goth. *baíra*.

skr. *bhāvāmi*, I am, cf. gr. *φύω*, lat. *fui*, ohg. *būan*.

skr. *bhrū-s*, eye-brow, cf. gr. *ὄφρῦς* and ohg. *brāwa*.

skr. *nábhas*, cloud, sky, gr. *νέφος*, cf. *νεφέλη*, lat. *nebula*, ohg. *nebul*.

skr. *jāmbha-s*, set of teeth, tooth, gr. *γόμφος*, ohg. *chamb*.

Dental explosives.

§ 82. **Skr. t.** Skr. *t* = idg. *t*:

skr. *tanú-ṣ*, thin, gr. *τανυ-*, cf. lat. *tenuis*, ohg. *dunni*.

skr. *tudāmi*, I push, I strike, cf. lat. *tundō* and goth. *stantan*.

skr. *tráyas*, three, gr. *τρεῖς*, lat. *trēs*, goth. *preis*.

skr. *pátāmi*, I fly, I fall, lat. *petō*, cf. gr. *πέτομαι*, *πίπτω*.

skr. *kártāmi* (more common *kṛntāmi*), I cut, lith. *kertu*.

skr. *pátnī*, lady, mistress, wife, cf. gr. *πότνια*.

In the combination *ts* the skr. *t* often goes back on idg. *s*:

skr. *vatsyāmi*, I shall put on, gr. *ἔσσω*.

skr. *vidvátsu*, loc. plur. of *vidváms-*, knowing.

§ 83. **Skr. th.** Skr. *th* = idg. *th* (cf. § 49):

skr. *véttha*, thou knowest, gr. *οἶσθα*, cf. goth. *waist*.

In Sanskrit there are very few words beginning with *th*: these few partly have an onomatopoetic character and partly are borrowed from other dialects.

§ 84. **Skr. d.** Skr. *d* = idg. *d*:

skr. *dádāmi*, I give, gr. *δίδωμι*, cf. lat. *dō*.

skr. *dāça*, ten, gr. *δέκα*, lat. *decem*, goth. *taíhun*.

skr. *dvāu*, ved. *dvā*, two, gr. *δύω*, lat. *duō*, cf. goth. pl. *twai*.

skr. *ádmi*, I eat, cf. gr. *ἔδω*, lat. *edō*, goth. *ita*.

skr. *chinádmi*, I cut off, cf. gr. *σχίζω*, *σχινδαλμός*, lat. *scindō*.

Before *bh* the skr. *d* sometimes goes back on idg. *z*:

ved. *mādbbhís*, instr. pl. of *mās*, moon, month.

Skr. *ed* in some cases represents ar. *azd* (see § 63):

ved. *sedyát*, 3 pers. sing. optat. perf. of *sad-*, to sit, avest. *hazdyāp*.

In the neighbourhood of a following aspirate *d* often goes back on idg. *dh*:

skr. *dádadhāmi*, I put, gr. *τίθημι*.

§ 85. **Skr. dh.** Skr. *dh* = idg. *dh*:

skr. *dhárṣāmi*, I dare, cf. gr. *θρασύς*, *θαρρέω*, goth. *ga-dars*.

skr. *dhūmá-s*, smoke, vapor, gr. *θῦμός*, lat. *fūmus*.

skr. *dháyāmi*, I suck, I drink, goth. *daddja*, cf. gr. *θῆσαι*, lat. *fēlāre*, *fēmina*.

skr. *mádhu*, honey, gr. *μέθυ*, ohg. *meto*.

skr. *mádhya-s*, middle, gr. *μέσος*, lat. *medius*, goth. *midjis*.

In the combinations *bdh*, *ddh*, *gdh* the skr. *dh* often goes back on an original *t*:

ved. *dábdhum*, to hurt: *dabhnómi*, I hurt.

ved. *baddhá-s*, bound: *badhnámi*, I bind.

skr. *dágdhum*, to burn: *dáhāmi*, I burn.

Skr. *edh* sometimes represents ar. *azdh* (see § 63):

skr. *edhí*, imper. of *as-*, to be, cf. avest. *zdi* and gr. *ἴσθι*.

Lingual explosives.

§ 86. **Skr. ṭ.** Skr. *ṭ* may correspond to idg. *t* (after *ṣ* and in prācritisms), to idg. *lt* and in loans from Prākṛit dialects to idg. *rt*.

Skr. *ṭ* (after *ṣ*) = idg. *t*:

skr. *aṣṭáu*, ved. *aṣṭá*, eight, gr. *ὀκτώ*, lat. *octō*, goth. *ahtau*.

skr. *uṣṭá-s*, burned, lat. *ustus*.

Skr. *ṭ* (in prācritisms) = idg. *t*:

skr. *aṭāmi*, I roam, I wander about, ved. *átāmi*.

skr. *caṭāmi*, I hide myself, ved. *cátāmi*.

Skr. *ṭ* = idg. *lt*:

skr. *paṭa-s*, woven stuff, cloth, garment, cf. oslav. *platino*, russ. *polotnó*, linen.

skr. *pátu-s*, sharp, cf. gr. *πλᾶτύς*, saltish.

skr. *sphátāmi*, I burst, cf. ohg. *spaltan*.

Skr. *ṭ* (in prācritisms) = idg. *rt*:

skr. *bhāṭa-s*, soldier: *bhṛtá-s*, hired (cf. gr. *Φέρω*).

skr. *kāṭa-s*, mat: *kartana-m*, spinning (cf. gr. *κύρτος*, *κάρταλος*, lat. *crātēs*, goth. *haúrds*).

skr. *kaṭú-ṣ*, sharp: *kart-*, to cut (cf. lith. *kartus*).

The *ṭ* in the nom. sing. and loc. pl. of the stems ending in *ç*, *j*, *ṣ* is to be explained by analogy:

skr. *vít*, clan, people, nom. of *viç-*, cf. *veça-s*, house, gr. *οἶκος*, lat. *vīcus* and goth. *weihs*. The regular nominative of *viç-* would have been **vik* (from **vikṣ*, idg. **uik-s*).

skr. *rát*, king, nom. of *rāj-*, cf. lat. *rēx*, gen. *rēgis*. Here also might have been expected a nominative ending in *k*, viz. **rāk* (from **rākṣ*, idg. **rēk-s*).

skr. *dvit*, hating, nom. of *dviṣ-*. The regular nominative would have been **dvik* (from **dvikṣ*, idg. **duis-s*).

In the *bh*-cases of these stems *ḍ* was regular: *viḍbbhīṣ* from idg. **uigbbhis*, *rāḍbbhīṣ* from idg. **rēgbbhis*, *dviḍbbhīṣ* from idg. **duizbbhis*, see § 60 and § 63. These cases made it possible, that a locat. pl. and a nom. sing. with *ṭ* were formed.

§ 87. **Skr. ṭh.** Skr. *ṭh* = idg. *lth*:

skr. *jathāra-m*, belly, womb, cf. goth. *kilper*.

skr. *kuṭhāra-s*, axe, lat. *culter*.

In prācritisms *ṭh* sometimes occurs instead of *th*. At the beginning of words *ṭh* is very rare.

§ 88. **Skr. ḍ.** Skr. *ḍ* may represent idg. *lḍ*, *zḍ*, *z*, *ḡ* and in prācritisms idg. *ḍ* and *rd*.

Skr. *ḍ* = idg. *lḍ*:

skr. *jaḍa-s*, cold &c., cf. lat. *gelu*, *gelāre*, icel. *kala* &c. (?).

Skr. *ḍ* = idg. *zḍ* (after *ĩ*, *ũ*, *ḷ*, *ṽ*):

skr. *nīḍa-s*, nest, lat. *nīdus*, ohg. *nest*.

Skr. *ḍ* = idg. *z* (after *ĩ*, *ũ*, *ḷ*, *ṽ* before *bh*):

skr. *dviḍbhīṣ*, instr. pl. of *dviṣ*-, hating.

Skr. *ḍ* = idg. *ḡ* (before *bh*):

skr. *viḍbhīṣ*, instr. pl. of *viṣ*-, clan, people.

§ 89. **Skr. ḍh.** Skr. *ḍh* may represent idg. *ldh*, *zdh*, *ḡh* + *t* and in prācritisms idg. *rdh* and *dh*.

Skr. *ḍh* = idg. *ldh*: no certain example.

Skr. *ḍh* = idg. *zdh* (after *ī*, *ū*, *ṛ*, *ṛ*):

ved. *ástoḍhvam*, 2 pers. pl. aor. med. of *stāumi*, I praise.

Skr. *ḍh* = idg. *ḡh* + *t*:

skr. *léḍhi*, licks: *léhmi*, I lick.

skr. *drḍhá-s*, firm: *dṛhyāmi*, I make firm.

skr. *vóḍhum*, to carry, *váhāmi*, I carry.

Guttural explosives.

§ 90. **Skr. k.** In general skr. *k* represents the idg. *q* and *k*.

Skr. *k* = idg. *q*:

skr. *kāsate*, coughs, cf. ags. *hwósta*.

skr. *katará-s*, who (from two), gr. *πότερος*, goth. *hwaþar*.

skr. *yákṛt*, liver, cf. gr. *ἥπαρ*, lat. *jecur*.

skr. *pañiktī-ṣ*, row of five, row, cf. gr. *πέμπτος*.

Skr. *k* = idg. *k*:

skr. *kakút* (*d*), summit, cf. lat. *cacūmen*.

skr. *karká-s*, crab, cf. gr. *καρκίνος*, lat. *cancer*.

ved. *kravīṣ*, raw flesh, gr. *κρέας*, cf. lat. *cruor*.

The combination *kṣ* may go back on different consonant-groups.

Skr. *kṣ* = idg. *ks* (*qs*):

skr. *dhakṣyāmi*, I shall burn, lith. *deksiū*, cf. skr. *dáhāmi*, I burn, lith. *degu* (also skr. *ni-dāghá-*, heat, summer, opruss. *dagis*, summer, goth. *dags* &c.).

skr. *vákṣi*, 2 pers. of *vácmi*, I say, cf. *vácas*, word, *vák*, voice, gr. *ἔπος*, *ὀπ-*, lat. *vōx* &c.

skr. *vakṣyāmi*, fut. of *vácmi*, I say.

skr. *úkṣāmi*, I grow, perf. *vavákṣa*, cf. gr. *ἄέξω*, goth. *wahsjan* &c. Lith. *auksztas*, high, proves, that we have to do with idg. *ks*.

Skr. *kṣ* = idg. *ks*:

skr. *vákṣi*, 2 pers. of *vácmi*, I will, cf. gr. *ἐκών*.

skr. *ákṣa-s*, axle, cf. gr. *ἄξων*, lat. *axis*, ohg. *ahsa*, lith. *aszis*, oslav. *osī*.

skr. *dákṣiṇa-s*, right, southern, avest. *daśina-*, oslav. *desinŭ*, lith. fem. *deszinė*, cf. gr. *δεξιός*, lat. *dexter*, goth. *taíhswa*.

Skr. *kṣ* = idg. *ss* (after *ī*, *ū*, *ṛ*, *ṛ*):

skr. *dvéḥṣi*, 2 pers. of *dvéṣmi*, I hate.

skr. *çokṣyāmi*, I shall dry up, gr. *αὔσω*.

Skr. *kṣ* = guttural + *p* (*ḍ*): see § 67.

§ 91. **Skr. kh.** Skr. *kh* = idg. *kh* (*qh*):

skr. *çanḁhā-s*, shell, gr. *κόγχος*.

skr. *skhálāmi*, I stumble, cf. gr. *σφάλλω*?

§ 92. **Skr. g.** Skr. *g* corresponds to idg. *g*, *g*.

Skr. *g* = idg. *g*:

skr. *gáu-ṣ*, bull, cow, gr. *βοῦς*, lat. **vōs* (*bōs*), ohg. *chuo*.

skr. *gurú-ṣ*, heavy, cf. gr. *βαρύς*, goth. *kaúrus* (also lat. *gravis*).

skr. *ágāt*, went, gr. *ἔβη*.

Skr. *g* = idg. *g*:

skr. *yugá-m*, yoke, age, gr. *ζυγόν*, lat. *jugum*, goth. *juk*.

skr. *ugrá-s*, mighty, terrible, cf. lat. *augeō*, goth. *aukan*.

In the neighbourhood of a following aspirate we often find *g* from *gh* or *gh*:

skr. *gṛádhyāmi*, I am eager, cf. goth. *grēdus*.

§ 93. **Skr. gh.** Skr. *gh* goes back on idg. *gh* or *gh*.

Skr. *gh* = idg. *gh*:

skr. *ghaná-s*, slayer (ved.), compact &c., gr. *Φόνος*, cf. ohg. *gundea*, ags. *gúð*.

Skr. *gh* = idg. *gh*:

skr. *dīrghá-s*, long, cf. gr. *δολιχός*.

Palatal affricates.

§ 94. **Skr. c.** Skr. *c* in general represents idg. *q*, *k* before palatal vowels and *i̇*.

Skr. *c* = idg. *q*:

skr. *carú-s*, pot, kettle, icel. *hverr*.

skr. *catvāras*, four, goth. *fidwōr*, cf. gr. *τέσσαρες*, lat. *quatuor*.

skr. *pāñca*, five, gr. *πέντε*, lat. *quinque*, goth. *fimf*.

Skr. *c* = idg. *k*:

skr. *cyávate*, moves, falls, cf. gr. *σεύω*.

skr. *rócate*, shines, pleases, cf. gr. *λευκός*, lat. *lūx*, *lūcet*, goth. *liuhaþ*.

In cases as *ucca-*, high, the first *c* is an assimilated *t* (here originally *d*).

§ 95. **Skr. ch.** On the origin of skr. *ch* see § 55. Instances:

skr. *chinádmi*, I cut off, cf. avest. *sid-*, gr. *σχίζω*, lat. *scindō*.

skr. *gácchati*, goes, cf. avest. *jasaiti*, gr. *βάσχω*.

§ 96. **Skr. j.** Skr. *j* represents the idg. *g*, *g*, before palatal vowels and *i̇*, as well as the idg. *ǵ*.

Skr. *j* = idg. *ǵ*:

ved. *járate*, crackles, invokes, cf. ohg. *quivrit*.

Skr. *j* = idg. *g*:

skr. *ójas*, strength, power, cf. *ugrá-s*, mighty, terrible, lat. *augeō* and goth. *aukan*.

Skr. *j* = idg. *ǵ*:

ved. *jánas*, race, family, gr. *γένος*, lat. *genus*, cf. goth. *kuni*.

skr. *jānu*, knee, cf. gr. *γόνυ*, lat. *genu*, goth. *kniu*.

skr. *juṣāmi*, I take pleasure, I relish, cf. gr. *γεύω*, goth. *kiusa* and lat. *gustus*, goth. *kustus*.

skr. *bhūrja-s*, birch, cf. ohg. *pirihha*.

skr. *mrjāmi*, I rub, wipe, strip, cf. gr. *ἀμέλω*, lat. *mulgeō*, ohg. *milchu*.

In cases as ved. *újjiti-s*, victory, the first *j* is an assimilated *d*.

In the neighbourhood of a following aspirate *j* may represent the idg. aspirates *ǵh*, *ǵh*, *ǵh*:

skr. *jagrāha*, seized: *grhṇāmi*.

skr. *jāhāti*, leaves, avest. *zazāiti*.

§ 97. **Skr. *jh*.** In skr. *ujjhitá-s*, left, from *ud* + **jhitá-s*, the skr. *jh* goes back on idg. *ǵh*: cf. *jáhāmi*, I leave. Most words containing *jh* are not clear.

Spirants.

§ 98. **Skr. *ç*.** In general skr. *ç* corresponds to idg. *ǵ*, but in some cases it is an assimilated *s*.

Skr. *ç* = idg. *ǵ*:

skr. *çatá-m*, hundred, gr. *ἑκατόν*, lat. *centum*, goth. *hund*.

skr. *çaṅkú-s*, wedge, oslav. *sqkŭ*, branch.

skr. *çāmsāmi*, I praise, I recite &c., cf. lat. *censeō*.

skr. *veça-s*, house, gr. *οἶκος*, lat. *vīcus*, cf. goth. *weihs*.

skr. *dāçāmi*, I bite, cf. gr. *δάκνω*.

ved. *ácma* (*n*), stone, gr. *ἄκμων*.

skr. *dadárça*, I have seen, gr. *δέδορκα*.

Skr. *ç* = idg. *s*:

skr. *çvácûra-s*, father in law, gr. *ἐκυρός*, cf. lat. *socer* and goth. *swaihra*.

skr. *çaçá-s*, hare, cf. ohg. *haso*.

§ 99. **Skr. ś.** Skr. ś lingualized from idg. *s*:

skr. *tíṣṭhāmi*, I stand, gr. *ἵστημι*.

skr. *uṣṭá-s*, burned, lat. *ustus*.

skr. *vṛkeṣu*, loc. pl. of *vṛka-s*, wolf, cf. oslav. *vlčec̣hŭ*.

ved. *joṣṭar-*, loving, cf. gr. *γευστήριον*.

skr. *dvéḱṣi*, 2 pers. of *dvéṣmi*, I hate.

skr. *dhṛṣṇómi*, *dhárṣāmi*, I dare, cf. gr. *θαρρέω* and goth. *gaders*.

In the combination *ṣṭ* the skr. ś often represents idg. *ḱ*:

skr. *aṣṭá* (ved.), *aṣṭáu*, eight, gr. *ὀκτώ*, lat. *octō*, goth. *ahtau*.

skr. *diṣṭi-ṣ*, indication &c., cf. ohg. *inziht*, lat. *dictiō*, gr. *δειξις*.

How the ś of *ṣaṭ*, six, is to be explained, is yet uncertain: probably an initial consonant has been lost, cf. avest. *χśvaś*.

Skr. ś = idg. *p*, *ḍ*: see § 67.

§ 100. **Skr. s.** Skr. *s* = idg. *s*:

skr. *saptá*, seven, gr. *ἑπτὰ*, lat. *septem*, cf. goth. *sibun*.

ved. *súna-s*, old, gr. fem. *ἐνη*, cf. lat. *senex* and goth. *sineigs*.

skr. *sáhas*, strength, might, violence, goth. *sigis*.

skr. *svásā* (*r*), sister, lat. *soror*, goth. *swistar*.

skr. *srávāmi*, I flow, I stream, gr. *ῥέω*, cf. ohg. *stroum*.

skr. *váste*, clothes one's self, puts on, cf. gr. *ἐννύμι*, *ἐσθής*, lat. *vestis*, goth. *wasjan*.

§ 101. **Skr. h.** Skr. *h* may go back on idg. *gh*, *gh* before palatal vowels and *i*, further on idg. *ǵh* and in dialectic words and forms on idg. *bh* and *dh*.

Skr. *h* = idg. *gh*:

skr. *hánmi*, I slay, cf. gr. *θείνω* and skr. *hatyā*, slaughter, ohg. *gundea*, ags. *gúđ*.

ved. *háras*, heat, gr. *θέρω*.

Skr. *h* = idg. *gh*:

ved. *drúhas*, harming spirits, cf. *drúhyāmi*, I harm, ohg. *triogan*.

Skr. *h* = idg. *ǵh*:

ved. *hēman-*, winter, gr. *χεῖμα*, *χειμών*, cf. gr. *χίων*, lat. *hiems* &c.

skr. *hamsá-s*, goose, swan &c., cf. gr. *χήν*, lat. *anser*, ohg. *gans*.

skr. *bāhú-s*, arm, gr. *πῆχυς*, ohg. *buog*.

skr. *léhmi*, I lick, cf. gr. *λείχω*, lat. *lingō*, goth. *-laigōn*.

Skr. *h* = idg. *bh*:

skr. *hárāmi*, I bear, I take, cf. *bhárāmi*, I bear, gr. *φέρω* &c.

skr. *grhṇāmi*, I seize, cf. ved. *grbhṇāmi*.

Skr. *h* = idg. *dh*:

Skr. *-hi*, suffix of the 2 pers. sing. imperat. act., cf. *-dhi*, gr. *-θι*.

skr. *-mahe*, *-mahi*, suffixes of the 1 pers. pl. med., gr. *-μεθα*.

In some words the skr. *h* seems to correspond to gr. *γ*, goth. *k*: see § 66.

PART III.

SANDHI-SYSTEM.

§ 102. **General remarks.** The rules, which govern the changes of the initial and final sounds of words in the sentence and in composition, are called *sandhi*-rules. Of course already in the mother-language the final sounds of preceding words and the initial sounds of following words had a mutual influence on each other, but it is impossible to reconstruct a complete tableau of this Indogermanic sandhi. Yet there are reasons to suppose, that already in the Indogermanic period the explosives and spirants were voiced or voiceless according to their position before voiced or voiceless explosives and spirants. The double forms gr. *πρῶτι* = skr. *práti* and gr. *πρός* = skr. *práty* may prove, that in the mother-language *i* before sonants became a semivowel, which suggests the supposition, that this was also the case with *u*. The simultaneous existence of the Indian dual-endings *-āu* = goth. *-au* (in *ahtau*) and *-ā* = gr. *-ω* allows the conclusion, that yet in a time of dialectic continuity the idg. diphthong *-ōu* before certain consonants or groups of consonants was simplified to *-ō*. Gr. *ἄκμων* and skr. *áçmā*, gr. *πατήρ* and skr. *pitā* stand in a similar relation to each other. By the side of roots

beginning with *s* we often find doublets without that initial consonant (skr. *sthágāmi*: lat. *tegō*, goth. *stautan*: skr. *tudāmi*) and hence we may conclude, that before the end of the Indogermanic period the initial *s* was lost, when preceded by a word ending in *s*. About these and other phenomena, which are explained by Indogermanic sandhi, see Brugmann 1, 490 sqq.

The Indian sandhi has gradually developed itself from that of the mother-language, because of which only a historical treatment of the sandhi-rules may claim a scientific value, but the uncertainty, which till now prevails in the history of the initial and final sounds, makes it preferable to arrange them systematically.

§ 103. **Final and initial vowels.** It is a rule in composition as well as in the sentence, that $-ā + ā-$ are contracted to \bar{a} , $-ī + ī-$ to \bar{i} , $-ū + ū-$ to \bar{u} . An *a*-vowel ($-ā$) combines with an *i*-vowel ($-ī$) to *e*, with an *u*-vowel ($-ū$) to *o*, with *r*- to *ar*, with *e*- and $\bar{a}i$ - to $\bar{a}i$, with *o*- and $\bar{a}u$ - to $\bar{a}u$, but $-ī$, $-ū$ and $-r$ before a dissimilar vowel or diphthong are changed each to its corresponding consonant (*y*, *v*, *r*). The original, but contracted diphthongs *-e* and *-o* remain unchanged before *a*-, which however disappears; before all other vowels they become *a* (we seldom find *-ay* and *-av*, which of course are the regular representatives of the antevocalic *ar*. $-a\bar{i}$ and $-a\bar{u}$: see § 7). The diphthongs $\bar{a}i$ and $\bar{a}u$ before all vowels may be retained unchanged (if so, they are written $\bar{a}y$, $\bar{a}v$), but it is also permitted to change them to \bar{a} .

About some liberty in Sanskrit as to the treatment of final and initial vowels see Whitney § 127 *a*, § 129 *c*, § 133 *a*, § 134 *c* and cf. Kern, *Taal en letteren* 6, 332. The peculiarities of the Vedic vowelsandhi are noticed in Whitney's grammar, to which it will suffice to refer.

Contraction of similar vowels:

na + *asti* = *nāsti*, not is.

tatra + *āyātaḥ* = *tatrāyātaḥ*, there arrived.

gatvā + *abravīt* = *gatvābravīt*, having gone he (she) said.

rājā + *ādadāt* = *rājādadāt*, the king took.

asti + *iha* = *astiha*, is here.

adhi + *içvaraḥ* = *adhīçvaraḥ*, over-lord.

devī + *iyam* = *devīyam*, this goddess.

stri + *ikṣate* = *striḁṣate*, the woman sees.

su + *uktam* = *sūktam*, hymn.

bāhu- + *ūru-* = *bāhūru-*, arms and thighs.

Combination of *ā* with dissimilar vowels:

tiṣṭha + *iha* = *tiṣṭheha*, remain here.

ratha- + *iṣā* = *ratheṣā*, shaft of a chariot.

bhāryā + *iva* = *bhāryeva*, as a wife.

kū + *īdṛçī* = *kedṛçī*, who (fem.) is such a one.

huta- + *ucchiṣṭam* = *hutocchiṣṭam*, remains of a sacrifice.

vrka- + *udara-* = *vrkodara-*, who has a wolf's belly (epithet of Bhīma).

sahasā + *utthāya* = *sahasotthāya*, hastily arisen.

rambhā- + *ūru-* = *rambhoru-*, who has thighs as a banana.

sapta + *ṛṣayaḥ* = *saptarṣayaḥ*, the seven sages, the seven stars of the Great Bear.

mahā- + *ṛṣabhaḥ* = *mahārṣabhaḥ*, a great (large) bull.

eka- + *ekaḥ* = *ekāikaḥ*, each.

mā + *evam* = *māivam*, not so (prohibitively).

jala- + *okas-* = *jalāukas-*, whose dwelling-place is the water, aquatic animal, leech.

mahā- + *oṣadhiḥ* = *mahāuṣadhiḥ*, a great simple.

loka- + *āiçvāryam* = *lokāiçvāryam*, dominion of the world.

mahā- + *āiçvāryam* = *mahāiçvāryam*, great dominion.

rūpa- + *āudārya-* = *rūpāudārya-*, beauty and generosity.

yathā + *āucityam* = *yathāucityam*, properly (according to custom).

Change of *ī*, *ū*, *r* to *y*, *v*, *r* before dissimilar vowels:

iti + *uktvā* = *ityuktvā*, having spoken thus.

kuttanī + *āha* = *kuttanyāha*, the procuress said.

madhu + *iva* = *madhviva*, as honey.

pitr- + *artham* = *pitrartham*, for the father's sake.

Treatment of *e* and *o* before vowels:

tathāgate + *api* = *tathāgate'pi*, even under such circumstances, nevertheless.

bhāno + *atra* = *bhāno'tra*, sun (vocat.), here.

te + *āgatāḥ* = *ta āgatāḥ*, they have arrived.

nagare + *iha* = *nagara iha*, here in the town.

sūno + *ehi* = *sūna(v) ehi*, son (vocat.), come.

Treatment of *āi*, *āu* before vowels:

tasmāi + *adadāt* = *tasmā(y) adadāt*, he (she) gave him.

tāu + *ūcatuḥ* = *tā(v) ūcatuḥ*, those two said.

Certain final vowels maintain themselves unchanged before any following vowel (Whitney § 138):

1° the vowels *ī*, *ū* and *e* as dual endings, both in nominal and in verbal forms;

2° the pronoun *amī* (nom. pl.), those;

3° the vowels of interjections as *aho*, *he* &c.

Some other exceptions to the vowel-sandhi are of less importance.

§ 104. **Simplification of consonant-groups.** The final *s* (*ṣ*) and *t* disappeared, when preceded by one or more consonants. If there remained after the dropping of *s* (*ṣ*) or *t* an other combination than *r* + explosive, even that was simplified. About probable traces of postconsonantic *t* and *s* see § 105.

Dropping of postconsonantic *s* (§):

vāk from **vāk-s*, voice, cf. avest. *vāχš*, lat. *vōx*.

adhok from **adhok-s*, 2 pers. sing. impf. of *dohmi*, I milk.

pāt from **pāt-s*, foot, cf. gr. dor. *πῶς*.

açāt from **açāt-s*, older **açās-s*, 2 pers. sing. impf. of *çāsmi*, I rule &c.: see § 62. The form *açāt* as 2 pers. does not seem to occur in literature, but is warranted by its *ts* from *ss*. The 3 pers. is also *açāt*, but here the *t* is not regular: **açās-t* would have given **açās*. It is not surprising, that the organic paradigm *açāsam*, *açāt*, *açās* has been changed by analogy to *açāsam*, *açās*, *açāt*.

ajāiṣ (*ajāiḥ*, see § 109) from **ajāiṣt*, 3 pers. sing. aor. of *jayāmi*, I conquer.

ahan from **ahan-s*, 2 pers. sing. impf. of *hanmi*, I slay.

vṛkān, *agnīn*, *paraçūn* from **vṛkāns*, **agnīns*, **paraçūns*, acc. pl. of *vṛka-s*, wolf, *agni-s*, fire, *paraçu-s*, axe, cf. goth. *dagans*, *anstins*, *sununs*, gr. cret. *λύκονς*, *τρίνς*, *υῖόνς* &c.

akar from **akar-s*, 2 pers. sing. aor. of *karomi*, I make.

Dropping of postconsonantic *t*:

adhok from **adhok-t*, 3 pers. sing. impf. of *dohmi*, I milk.

ahan from **ahan-t*, 3 pers. sing. impf. of *hanmi*, I slay.

akar from **akar-t*, 3 pers. sing. aor. of *karomi*, I make.

Dropping of two or more consonants:

prāṇi from **prāṇik-s*, eastern.

bharan from **bharant-s*, bearing, cf. goth. *baírand*s.

achān from **achānts-t*, 3 pers. sing. aor. (1 pers. *achāntsam*) of *chand-*, to appear, to please.

Examples of *r* + explosive remaining unchanged after the loss of a final *s* (§):

ūrḥ from **ūrḥ-s*, strength, vigor.

suhārt from **suhārt-s*, having a good heart.

In cases as *viṭ*, *dviṭ* &c. the *ṭ* is not organic: see § 86.

§ 105. **Final nasals.** In general it is a rule, that final nasals, as to the place of their articulation, are assimilated to a following consonant, but before labials and gutturals *-n* is not modified.

The *-n*, *-ñ* (from *-n*), *-ṇ* (from *-n*) before a following *t* (*th*-), *c*- (*ch*-), *ṭ* (*ṭh*-) usually insert a sibilant: its mode of articulation depends on the following initial consonant. Before the inserted sibilant the nasal becomes anusvāra. The origin of this rule is probably due to the circumstance, that the idg. *-ns* was simplified to *-n* (see § 104), except before those voiceless dentals, palatal affricates and linguals.

The combination of *-n* + *ç*- is *-ñ ç*- as well as *-ñ ch*-. In the same way *-n* + *s*- and *-n* + *ṣ*- are often combined to *-nt s*-, *-nt ṣ*-.

The *-n* before *l*- is assimilated to *-l*, after nasalizing the preceding vowel. The labial nasal *-m* before *y*-, *v*-, *r*-, *l*-, *h*- and sibilants becomes anusvāra.

All nasals except *-m*, when preceded by a short vowel, are doubled before any initial vowel.

Partial assimilation of nasals to initial consonants:

tam + *darīdram* = *tan darīdram*, that poor man (acc.).

apaçyam + *ḍākinīm* = *apaçyaṇ ḍākinīm*, I saw a witch.

imam + *kumāram* = *imaṇ kumāram*, this boy (acc.)

pāṇim + *jagrāha* = *pāṇiṇ jagrāha*, I (he) seized the hand.

pakṣin + *ḍayase* = *pakṣiṇ ḍayase*, bird (voc.), thou art flying.

tān + *janān* = *tāñ janān*, those people (acc.).

Examples of *-n* before voiceless dentals, palatal affricates and linguals:

tān + *tarūn* = *tāṇs tarūn*, those trees (acc.).

tān + *cārān* = *tāṇç cārān*, those spies (acc.).

tān + taṅkān = tāṁs taṅkān, those pickaxes (acc.)

In many cases this *s* (ç, š) has an etymological value: *tān* goes back on idg. **tons* (gr. cret. *τόνς*, goth. *pans*) and so *tāṁs tarūn* regularly represents an original **tons tēruns*.

Examples of *-n* before sibilants:

tān + çatrūn = tāñ çatrūn or *tāñ chatrūn*, those enemies (acc.).

mahān + san = mahān san or *mahānt san*, being great.

tān + ṣaṭ = tān ṣaṭ or *tānt ṣaṭ*, those six (acc.)

Example of *-n + l*:

tān + lokān = tāṁl lokān, those worlds (acc.).

Examples of *-m* before semivowels, liquids, *h*- and sibilants:

tām + yātrām = tāṁ yātrām, that festive train (acc.).

gahanam + vanam = gahanam vanam, a thick forest.

bahumūlyam + ratnam = bahumūlyam ratnam, a precious jewel.

tam + laguḍam = tam laguḍam, that cudgel (acc.).

vṛkam + hanmi = vṛkam hanmi, I slay a wolf.

jalām + sravati = jalam sravati, the water flows.

vīraṇām + çāuryam = vīraṇām çāuryam, the valor of heroes.

çoṇitam + ṣṭhivati = çoṇitam ṣṭhivati, he (she) spits blood.

Gemination of nasals after a short vowel:

gacchan + apatat = gacchann apatat, going, he fell.

pratyaṇi + āsinaḥ = pratyaṇi āsinaḥ, sitting towards the west.

But:

annam + icchati = annam icchati, he (she) desires food.

§ 106. **Voiced and voiceless explosives.** In general Sanskrit has maintained the Indogermanic rules. Voiced explosives become voiceless before voiceless consonants and in pausa; voiceless explosives become voiced before voiced consonants and (a specific Sanskrit phenomenon) before vowels. The change of tenues to mediae before vowels is to be explained by analogy: see Brugmann 1, 494.

Change of mediae to tenues before voiceless consonants and in pausa:

tad + *phalam* = *tat phalam*; that fruit.

tasmād + *samudrād* = *tasmāt samudrāt*, from that ocean.

Change of tenues to mediae before voiced consonants and vowels:

ṛtvik + *bhāṣate* = *ṛtvig bhāṣate*, the priest speaks.

avasat + *vārāṇasyām* = *avasad vārāṇasyām*, he (she) dwelt in Benares.

akrīṇāt + *annam* = *akrīṇād annam*, he (she) bought food.

§ 107. **Explosives before nasals.** Final explosives, when followed by an initial nasal, are converted to their homorganic nasals. Only the assimilation of *-d* to *-n* is in harmony with the general phonetic rules of Sanskrit (see § 50).

Examples:

vāk + *mama* = *vāni mama*, my voice.

viḍ- + *mūtra-* = *viṇmūtra-*, faeces and urine (the *ṇ* is to be explained by assuming, that from the *bh-* cases of *viṣ-* a stem *viḍ-* was abstracted, which afterwards was composed with *mūtra-*. The nom. *viṭ* is a similar analogous formation).

tad + *nagaram* = *tan nagaram*, that town.

§ 108. **Assimilation of dental explosives to palatal affricates, to *ç*, to linguals and to *l*.** The dental explosives are totally assimilated to the initial consonant of the following word, if this consonant is a nasal (see § 107), a palatal affricate, a lingual or a *l*. With an initial *ç-* the dental explosives are combined to *cch*.

Examples:

tad + *ca* = *tac ca*, and that.

bhavat- + *jāmātā* = *bhavajjāmātā*, your son in law.

atūḍayat + *ḍiṇḍimam* = *atūḍayaḍḍiṇḍimam*, he beat the drum.

tad + *loham* = *tal loham*, that iron.

tad + *çrṇomi* = *tac çhrṇomi*, I hear that.

§ 109. **Treatment of -s and -ṣ.** Only after the Aryan *a* and *ā* the -s was preserved unchanged, after *ī*, *ū* and diphthongs it had become -ś before the end of the Aryan period. In Indian this -ś was lingualized (-ṣ). About -s (-ṣ) after consonants see § 104. The sandhi-rules concerning -s and -ṣ may be formulated as follows:

Before *t-* (*th-*) the original -s remains unchanged, but -ṣ is converted to -s; before *ṭ-* (*ṭh-*) the -ṣ remains unchanged, but -s becomes -ṣ; before *c-* (*ch-*) the dental and the lingual sibilants are both palatalized, i. e. converted to -ç. As to the conversion of -ṣ to -s before dentals (*t-*, *th-*) it is to be remarked, that in the Veda often occur cases as *agníṣ tvā*, *çúciṣ tvám*, in which the assimilation has followed an opposite direction: here the final -ṣ has assimilated the initial dental (*agníṣ*, fire, + *tvā*, thee; *çúciṣ*, clear, pure, + *tvám*, thou), which is in harmony with the treatment of *ṣ* + *t* in internal combination (see § 49). Before *k* (*kh*), *p* (*ph*) and in pausa -s and -ṣ become visarga: yet in the Veda cases as *vástoṣ pátih*, *áyus kṛṇotu* are not rare (*vástoṣ*, gen. of *vástu*-, house, + *pátih*, lord; *áyus*, long life, + *kṛṇotu*, may he make). Before sibilants -s and -ṣ are either assimilated or converted to visarga. Before voiced consonants, except *r-*, and before vowels -ṣ becomes -r, but before *r-* the -ṣ disappears after lengthening a preceding *i* or *u*. Before voiced consonants and before *a-* the very common ending -as becomes -o, but before other vowels it becomes -a; in -ās the -s is dropped before voiced consonants as well as before vowels without leaving any trace. After the -o, which goes back on -as, an initial *a-* disappears. On the probable course of development of this system see Brugmann 1, 495.

The unchanged *-s* before *t-*:

nṛpas + tuṣyati = *nṛpas tuṣyati*, the king is satisfied (pleased).

namas tasmāi = *namas tasmāi*, reverence to him.

Dentalization of *-ṣ* before *t-*:

agniṣ + tiṣṭhati = *agniṣ tiṣṭhati*, a fire stands.

guruṣ + tāḍayati = *gurus tāḍayati*, the teacher beats.

The unchanged *-ṣ* before *ṭ-*:

paraçuṣ + ṭanikaṣ ca = *paraçuṣ ṭanikaṣ ca*, hatchet and pickaxe.

Lingualization of *-s* before *ṭ-*:

ṭittibhas + ṭittibhī ca = *ṭittibhaṣ ṭittibhī ca*, male and female of Parra jacana.

Palatalization of *-s* and *-ṣ* before *c-* (*ch-*):

kumbhīlas + corayati = *kumbhīlaṣ corayati*, the thief steals.

ṣatruṣ + chinatti = *ṣatruṣ chinatti*, the foe cuts off.

Change of *-s* and *-ṣ* to visarga before *k-*, *kh-*, *p-*, *ph-*:

amātyas + kupyati = *amātyaḥ kupyati*, the minister is angry.

taruṣ + kampate = *taruḥ kampate*, the tree is trembling, being shaken.

naras + khādati = *naraḥ khādati*, the man eats.

paçuṣ + khidyate = *paçuḥ khidyate*, the animal is being teased.

khecarās + patanti = *khecarāḥ patanti*, the birds fly.

mṛtyoṣ + pāṣas = *mṛtyoḥ pāṣaḥ*, the bond of death.

apaṣyas + phalāni = *apaṣyaḥ phalāni*, thou sawest fruits.

Change of *-s* and *-ṣ* to visarga in pausa:

yudhyante + kṣatriyās = *yudhyante kṣatriyāḥ*, the noble-men fight.

rakṣati + nṛpas = *rakṣati nṛpaḥ*, the king protects.

ṣūdrāṇām + jātiṣ = *ṣūdrāṇāṅ (ṣūdrāṇām) jātiḥ*, the caste of the Ṣūdra's.

tarati + nāuṣ = *tarati nāuḥ*, the ship crosses.

Treatment of -s and -ṣ before sibilants:

nṛpas + śidati = nṛpaḥ śidati or *nṛpas śidati*, the king sits.

cakṣuṣ + sphurati = cakṣuḥ sphurati or *cakṣus sphurati*, the eye twitches.

bālas + çete = bālaḥ çete or *bālaç çete*, the boy is lying (on a couch &c.).

khadyotās + śatpadāç ca = khadyotāḥ śatpadāç ca or *khadyotās śatpadāç ca*, fire-flies and bees.

Change of -ṣ to -r before voiced consonants:

agniṣ + dahati = agnir dahati, the fire burns.

sādhuṣ + yacchati = sādhur yacchati, the good man gives.

nāuṣ + badhyate = nāur badhyate, the ship is being bound.

Change of -ṣ to -r before vowels:

ṛṣiṣ + uvāca = ṛsir uvāca, the sage said.

viṣṇuṣ + iva = viṣṇur iva, as Vishnu.

gireṣ + upatyakā = girer upatyakā, the land lying at the foot of the mountain.

gāuṣ + iyam = gāur iyam, this cow.

Change of -iṣ and -uṣ to -ī and -ū before r-:

dāçarathiṣ + rāmas = dāçarathī rāmaḥ, Rāma, the son of Daçaratha.

çiçuṣ + roditi = çiçū roditi, the child weeps.

Change of -as to -o before voiced consonants:

açvas + dhāvati = açvo dhāvati, the horse runs.

mṛgas + mriyate = mṛgo mriyate, the antelope dies.

Change of -as to -o before a-:

tūṣṭas + aham = tūṣṭo^hham, I am satisfied (pleased).

yas + anṛtaṁ vadati = yoⁿṛtaṁ vadati, who speaks untruth.

Change of -as to -a before other vowels than a-:

kāulikas + āha = kāulika āha, the weaver said.

lomaças + uvāca = lomaça uvāca, Lomaça said.

Change of *-ās* to *-ā* before voiced consonants and before vowels:

vihaḡās + ḡayante = vihaḡā ḡayante, the birds fly.

narās + vadanti = narā vadanti, the men say.

bālās + annam pṛcchanti = bālā annam pṛcchanti, the children ask food.

In particular we must notice the treatment of the pronouns *sa*, that, and *eṣa*, this. Though originally they do not end in *-s*, yet their pausa-form is *saḥ*, *eṣaḥ* and before *a-* they appear as *so*, *eṣo*, after the *-o* of which forms the initial *a-* disappears.

Examples:

sa + dadarṣa = sa dadarṣa, he saw.

sa + pumān = sa pumān, that man.

sa + avadat = so'vadat, he said.

mūrkhās + sa = mūrkhāḥ saḥ, he is a fool.

The exclamation *bhoṣ* before vowels and before voiced consonants appears as *bho* (instead of **bhor*): the cause of this irregularity is the origin of the word, which is a contracted form of *bhavas*, voc. of *bhavant-*, your honor (pron. pers. used in reverent allocution).

§ 110. **Treatment of -r.** The sandhi-rules concerning *-r* are but partly the organic result of phonetic processes: much in the sandhi of *-r* is due to analogy. I shall simply give an account of the rules without trying to trace them to their origin.

Before *c-* (*ch-*) the *-r* is turned into *-ç*; before *ṭ-* (*ṭh-*) into *-ṣ*; before *t-* (*th-*) into *-s*. Before *k* (*kh*), *p* (*ph*), before sibilants and in pausa the *-r* becomes visarga. Before an initial *r-* the final *-r* disappears after lengthening a preceding short vowel. In any other case *-r* remains unchanged.

Substitution of sibilants for *r* before *c-* (*ch-*), *ṭ-*, *t-*:

punar + *cacāra* = *punaṣ cacāra*, again he wandered.

niṣedur + *chāyāyām* = *niṣeduṣ chāyāyām*, they sat down in the shadow.

pitur + *ṭaṅkas* = *pituṣ ṭaṅkaḥ*, the father's pickaxe.

ūcur + *te* = *ūcus te*, they said.

Change of *-r* to visarga before *ḥ* (*kh*), *p* (*ph*), sibilants and in pausa (only in pausa the change seems to have been organic, see Brugmann 1, 494):

punar + *karoti* = *punaḥ karoti*, again he (she) does.

dadur + *phalāni* = *daduḥ phalāni*, they have given fruits.

babhūvur + *samāje* = *babhūvuḥ samāje*, they were at the assembly.

vanam + *vicerur* = *vanam viceruḥ*, they wandered through the forest.

Change of *-ur*, *-ar* to *-ū*, *-ā* before *r-*:

ūcur + *rāmam* = *ūcū rāmam*, they said to Rāma.

punar + *rakṣati* = *punā rakṣati*, again he protects.

The unchanged *-r* before voiced consonants and before vowels:

pitar + *dehi* = *pitar dehi*, father (voc.), give.

punar + *jagāma* = *punar jagāma*, again he went.

punar + *āha* = *punar āha*, again he said.

dadur + *annam* = *dadur annam*, they gave food.

§ 111. **Changes of initial consonants.** In § 108 we saw, that *ç-* with a preceding dental combines to *cch-*. An initial *ch-* becomes *cch-*, when preceded by a short vowel, the preposition (prefix) *ā* or the prohibitive adverb *mā*. Finally we mention the rule, that an initial *h-* is changed to the aspirate of a preceding media, whether this media is original or a softened tenuis (see § 106).

Change of *ch-* to *cch-*:

āhara + chattram = āhara cchattram, bring the parasol.

ā + chādītas = ācchādītaḥ, covered.

Change of *h-* to the aspirate of a preceding media:

prthak + haranti = prthag gharanti, they take separately.

tad + hastas = taddhastah, his hand.

PART IV.

A C C E N T.

§ 112. **The accent of the Indogermanic period.** Verner's law (Kuhn's *Zeitschr.* 23, 97 sqq.) has been an evident proof of the fact, that the Indian stress, as it is handed down to us in some Vedic books and by ancient Indian grammarians, generally fell on the same syllables as in the Indogermanic mother-language. In Indian, Balto-Slavonic and Ur-Germanic the so-called *free* accent prevailed, i. e. that neither by the number of syllables nor by the quantity of any syllable the stress was bound to a certain place. Therefore we must assume, that the accent of the mother-language was also a free one. Concerning the accent of the sentence we may learn from the comparison of the Indogermanic languages, that already in a period of dialectic continuity some conjunctions, the interrogative pronouns, when used as indefinites, the personal pronouns, when not used emphatically or antithetically, in many cases also the vocatives and the *verbum finitum* in an independent clause were deprived of their stress by the preceding word.

Long before the separation of the Indogermanic dialects

all vowels of so-called toneless syllables were weakened: Strachan (Bezz. Beitr. 14, 173 sqq.) and Kretschmer (Kuhn's Zeitschr. 31, 325 sqq.) have shown, that this rule is not to be restricted to pretonic vowels. Many scholars therefore assume, that the Indogermanic accent of an early period must have been a strong expiratorical one (but cf. Finck, Ueber das verhältnis des baltisch-slavischen nominalaccents zum urindogermanischen, Marburg 1895, 29 sqq.) and that it became less expiratorical or even musical towards the end of the proethnic period.

Now there is no longer any doubt, but that the mother-language had two accents of different quality, one of which is represented by the Sanskrit udātta and the Greek ὀξεῖα, while the other has left its traces in the dissyllabic value of some long vowels in the Vedic dialect, the Greek περισπωμένη and the Lithuanian *schleifton*. See Bezzenberger, Bezz. Beitr. 7, 66 sqq.; Hanssen, Kuhn's Zeitschr. 27, 612 sqq.; Hirt, Idg. forschungen 1, 1 sqq. 195 sqq.

To Hirt we owe an excellent monography on all questions concerning the Indogermanic accentuation (Hirt, Der indogermanische akzent, Strassburg 1895).

§ 113. **Accentual agreement between Sanskrit and Greek.** The liberty of accent, which prevailed in the mother-language, was restricted in Greek by many special rules (see Hirt, Der idg. akzent 24 sqq.). Yet there are many words — dissyllabic and trisyllabic —, which have the same accent in Indian and in Greek.

A few examples will suffice:

skr. *padás*, gr. *ποδός*, gen. of skr. *pát*, foot, gr. dor. *πῶς*.
 skr. *tráyas*, three, gr. *τρεῖς*, but loc. skr. *triṣú*, cf. gr. *τρισι*.
 skr. *pāñca*, five, gr. *πέντε*, goth. *fimf*.

- skr. *dāṣa*, ten, gr. δέκα, goth. *taíhun*.
 skr. *saptá*, seven, gr. ἑπτά.
 skr. *aṣṭá(u)*, eight, gr. ὀκτώ.
 skr. *īkṣa-s*, bear, gr. ἄρκτος.
 skr. *jámbha-s*, set of teeth, gr. γόμφος.
 ved. *dāma-s*, house, gr. δόμος.
 skr. *āṣva-s*, horse, gr. ἵππος, goth. *aíhwa*.
 skr. *ūrdhvá-s*, high, cf. gr. ὀρθός.
 ved. *mīḍhá-(m)*, prize, contest, gr. μισθό-(ς).
 skr. *dhūmá-s*, smoke, gr. θυμός.
 skr. *yajñá-s*, sacrifice, gr. ἄγνος.
 skr. *ṣrutá-s*, heard, heard of, gr. κλυτός.
 skr. *jñātá-s*, known, gr. γνωτός.
 skr. *gurú-ṣ*, heavy, gr. βαρύς.
 skr. *svādú-ṣ*, sweet, gr. ἡδύς.
 skr. *mádhu*, honey, gr. μέθυ.
 skr. *nábhas*, sky, gr. νέφος.
 ved. *jānas*, race, gr. γένος.
 skr. *mānas*, mind, gr. μένος.
 skr. *āndhas*, herb, gr. ἄνθος.
 skr. *grávas*, fame, gr. κλέος.
 skr. *sádas*, seat, gr. ἔδος.
 ved. *bhárma (n)*, bearing, gr. Φέρμα.
 ved. *hóma (n)*, pouring, oblation, gr. χεῦμα.
 ved. *vásma (n)*, cover, gr. lesb. τέμμα.
 skr. *pitá*, father, gr. πατήρ, goth. *fadar*.
 skr. *devá*, brother in law, gr. δᾱήρ.
 skr. *bhrátā*, brother, gr. Φράτωρ, goth. *brōþar*.
 skr. *svásā*, sister, cf. gr. ἑορες.
 In trisyllabic words and forms:
 skr. *úttara-s*, further, left &c., gr. ὕστερος.

skr. *dúhitar*, gr. *θύγατερ*, voc. of skr. *duhitā*. daughter,
gr. *θυγάτηρ*.

skr. *svādīyas* neutr., sweeter, gr. *ἥδιον*.

ved. *aṣṭāpāt*, with eight feet or parts, gr. *ὀκτώπους*.

skr. *pitāras*, fathers, gr. *πατέρες*.

skr. *janitā*, father, gr. *γενετήρ*.

ved. *iṣirā-s*, strong, quick &c., gr. *ἰερός*.

skr. *bahulā-s*, numerous &c., gr. *παχυλός*.

§ 114. **Accentual agreement between Sanskrit and Germanic.** It may be useful to give some examples of Verner's law, which agree with the accent of the identical Sanskrit words and forms:

skr. *pitā*, father, goth. *fadar*, germ. **faðēr* from **faþēr*.

skr. *ātmā* (*n*), breath, soul, os. *ātōm*, ohg. *ātum*, germ. **ētmén-* from **ēpmén-*.

skr. *ketú-s*, brightness, light, beam, banner, goth. *haidus*, germ. **χaidú-s* from **χaiþú-s*.

skr. *nakhāra-s* (*nakharā-s*), nail, claw, ohg. *nagal*, germ. **nagló-s* from **naχló-s*.

skr. *vṛkī*, she-wolf, icel. *ylgr*, germ. **ulγwí-s* from **ulχwí-s*.

skr. *snusā*, daughter in law, ohg. *snura*, germ. **snuzā* from **snusā*.

skr. *māṁsā-m*, flesh, meat, goth. *mimz*, germ. **mimzō-m* from **mimsó-m* (**mēmsó-m*).

In the verbal system:

skr. *svāpāyāmi*, I cause to sleep, cf. ohg. *int-swebbiu*: skr. *svāpna-s*, icel. *svefn*.

skr. *vavṛtimā*, 1 pers. pl. perf., *vavṛtānā-*, part. perf. med. of the root *vart-*, to turn &c., ags. *wurdon*, *worden*, ohg. *wurtum*, *giwortan*: skr. *vártana-m*, vb. noun, *vavárta*, 1. 3. pers. sing. perf., ags. *weorðan*, *wearð*, ohg. *werdan*, *ward*.

skr. *didīṣimá*, 1 pers. pl. perf., *didīṣāná-*, part. perf. med. of the root *deç-*, to indicate &c., ags. *tigon*, *tigen*, ohg. *zigum*, *gizigan*: skr. *déçana-m*, vb. noun, *didéça*, 1. 3. pers. sing. perf., ags. *téon*, *táh*, ohg. *zihan*, *zēh*.

skr. *jujuṣimá*, 1 pers. pl. perf., *jujuṣāṇá-*, part. perf. med., *juṣāṇá-*, part. aor. med. of the root *jōṣ-*, to enjoy, ags. *curon*, *coren*, ohg. *kurum*, *gikoran*: skr. *jóṣaṇa-m*, vb. noun, *jujóṣa*, 1. 3. pers. sing. perf., ags. *céosan*, *céas*, ohg. *kiosan*, *kōs*.

§ 115. **Dissyllabic value of long vowels.** Dissyllabic value of long vowels in Vedic, corresponding to the Greek *περι-σπωμένη* and the Lithuanian *schleifton*:

a. Gen. pl., ending in *-ām* (*-aam*), for instance ved. *vṛkāṃ* (*vṛkaam*), cf. gr. *θεῶν*, lith. *vilkū*, ohg. *wolfo* (goth. *wulfē*).

b. Abl. sing. of *-a-* stems, ending in *-ad* (*-aad*), for instance *vṛkāḍ* (*vṛkaad*), cf. lith. *vilkó*, goth. adv. *þaprō*.

c. Nom. acc. pl. of *-ā-* stems, ending in *-ās* (*-aas*), for instance *áçvās* (*áçvaas*), cf. lith. nom. pl. *mėrgós* and goth. *gibōs*.

d. Nom. pl. of *-a-* stems, ending in *-ās* (*-aas*). This form is not preserved in Greek and Lithuanian. With *vṛkāṣ* (*vṛkaas*) only goth. *wulfōs* may be compared.

There are yet other cases, where long vowels of the Vedic dialect have (resp. may have) the metrical value of two syllables, but here it is of no use to cite them all: it will suffice to refer to Hirt, *Idg. forschungen* 1, 5 sqq.

§ 116. **Accentuation of texts.** The accentuation is marked only in manuscripts of the *Saṃhitā*'s and some other works belonging to the *Veda*.

The Indian grammarians distinguish the following accents:

1. *udātta-*, i. e. raised, corresponding to the Greek *ὀξεῖα*.
2. *anudātta-*, i. e. not raised, corresponding to the Greek *βαρεῖα*.
3. *svarita-*, see Böhtlingk & Roth. The *svarita* is nearly

always found on syllables, in which a vowel, be it short or long, is preceded by a *y* or *v* representing an original *i* or *u* with udātta-accent. But there is also a *dependent svarita*-, which falls on all syllables immediately preceded by an udātta, whether in the same or in another word, unless it be followed by a syllable, which bears an udātta or a svarita.

In the hymns of the R̥gveda the accent is written as follows:

1. The udātta is not marked.

2. The svarita, independent or dependent, is marked by a short perpendicular stroke above.

3. The anudātta, next preceding an udātta or independent svarita, is marked by a short horizontal stroke below.

In the lexicon of Böhtlingk and Roth (also in Böhtlingk's chrestomathy) the udātta is indicated by a small Sanskrit *u* above. In transliteration the udātta is written $_$, the svarita is written $_$.

Examples:

vípràsya (the *i* bears the udātta and therefore the *a* of the following syllable has a dependent svarita).

kathám rasáyā atarah páyāmsi (the first syllable of *rasáyā*, though immediately preceded by an udātta, has no dependent svarita, because it is also followed by an udātta).

tanvā (with independent svarita, from *tanúā*).

svār (with independent svarita, from *súār*).

nadyàs (with independent svarita, from *nadràs*).

§ 117. **Enclisis.** The principal rules about enclisis are the following:

1. The vocative is enclitic, except at the beginning of a sentence or a pāda.

2. The verbum finitum is enclitic in an independent clause,

except at the beginning of a sentence or a pāda. In a dependent clause it is accented.

3. Many particles (*ca, vā, u, sma, iva, cid, svid, ha* &c.) are always accentless.

4. Many forms of pronominal stems are always enclitic (*mā, me, nāu, nas, tvā, te, vām, vas* &c.).

Some restrictions and particularities are to be found in Whitney's grammar (§ 314 and § 591 sqq.).

Enclitic vocatives:

tvám agne vratapá asi.

nákir indra tvád úttaro.

á tñ na indra vṛtrahann | asmákam ardhám á gahi.

párvatānaam | khidrám bibharṣi prthivi.

But:

agne yám yajñám adhvarám | viçvátah paribhūr ási.

agne náya supáthā rāyé asmán.

vāyo yé te sahasríṇo | ráthāsas tébhir á gahi.

yátah pári jārā ivācárantī | úṣo dadṛkṣé ná púnar yatíva.

Enclitic verbum finitum:

índram víçvā avivṛdhan | samudrávyacasam gírah.

agním dūtám vṛṇīmahe.

parjányāya prá gāyata.

asmé indrā varuṇā çárma yacchatam.

But:

gāyanti tvā gāyatríṇo | árcanti arkám arkíṇah.

gr̥bhṇāmi te sāubhagatvāya hástam.

índrasya nú vīrītāṇi prá vocam | yāni cakāra prathamāni vajrī.

rátham yé cakrúḥ suvṛtam nareṣṭhām.

yó gárbham óṣadhīnaam | gávām kṛṇóti árvatām.

yásu (apsú) rájā váruṇo yásu sómah | víçve devá yásu ūrjam mādanti.



